



## **Australian Standards for the Export of Livestock (Version 2.3) 2011<sup>1</sup>**

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The standards set out in this instrument are the *Australian Standards for the Export of Livestock (Version 2.3) 2011* referred to in clause 3 of the *Australian Meat and Live-stock Industry (Standards) Order 2005*.

Dated

4

March 2011

A handwritten signature in black ink, appearing to read 'Simon Murnane', written in a cursive style.

SIMON MURNANE  
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# Standard 1      Sourcing and on-farm preparation of livestock

## Division 1      Preliminary

### 1.1      Guiding principle

Sourcing of appropriately prepared livestock that are fit to travel is critical to successful health and welfare outcomes during export.

### 1.2      Required outcomes

- (1) Livestock sourced for export must meet any requirement under a law of a state or territory relating to the sourcing of livestock. State and territory governments are responsible for ensuring that these requirements are met.
- (2) Livestock sourced for export must meet these Standards and importing country requirements.
- (3) Livestock sourced for export that become sick or injured during on-farm preparation must be excluded from export, and arrangements must be made for their prompt and humane handling and care.
- (4) AQIS must be satisfied that these Standards and importing country requirements are met before issuing a health certificate and export permit.

### 1.3      Overview

- (1) This part of the export chain encompasses the sourcing of livestock for export by sea and their on-farm preparation, up to the point of loading and transport to registered premises. The sourcing of livestock for export by air and their on-farm preparation is addressed in *Standard 6 — Air transport of livestock*.

- (2) Livestock sourced for export must meet the Standards in the table below. These Standards cover relevant state and territory animal health and welfare requirements and importing country requirements. They also reflect relevant aspects of the national Model Codes of Practice for the Welfare of Animals for various species of livestock.
- (3) Exporters must source suitable livestock that meet consignment specifications such as species, class, condition, animal health status and number of livestock. Animal health and production records may be required to confirm the eligibility of proposed consignments of livestock for export.
- (4) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a state or territory. State and territory governments are responsible for ensuring that these jurisdictional requirements are met under respective state and territory legislation. AQIS must be satisfied that importing country requirements and the Standards have been met before issuing a health certificate and export permit.

**Note.** Further details regarding roles and responsibilities and the export chain process are outlined in the Australian Position Statement on the Export of Livestock ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

#### **1.4 Linkages to other parts of the export chain**

In the planning phase, the exporter must specify the livestock to be sourced for export in the consignment risk management plan (**CRMP**). Only livestock sourced and prepared according to the approved CRMP should be presented for transport to registered premises.

#### **1.5 Definitions**

In this Standard:

**AQIS** means the Australian Quarantine and Inspection Service.

**CRMP** means a consignment risk management plan.

**fat**, in relation to livestock, means having a body condition score, under Table A1.1.2, of 5 or more.

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*NOI* means a notice of intention to export.

## Division 2 Standard for sourcing and on-farm preparation of livestock

### 1.6 Standard for sourcing and on-farm preparation of livestock

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Number	Standard
S1.1	Livestock sourced for export must meet any relevant animal health and welfare requirements under state and territory legislation and relevant requirements under national Model Codes of Practice for the Welfare of Animals.
S1.2	Livestock sourced for export must meet importing country requirements.
S1.3	Livestock sourced for export must be: (a) identified to the property of source; (b) accompanied by a correctly completed and signed declaration as to the identification of the livestock and property of source; and (c) individually identified where testing is required during preparation.
S1.4	Livestock sourced for export and intended for human consumption must comply with Australian food safety requirements, including standards for chemical residues or environmental contaminants.
S1.5	Fat <i>Bos taurus</i> cattle must not be sourced for export from or through the ports of Darwin, Weipa or Wyndham from 1 October to 31 December (inclusive). <p style="text-align: center;">Note. "Fat" means having a body condition score, under Table A1.1.2, of 5 or more: see clause 1.5.</p>
S1.5A	<i>Bos taurus</i> cattle bred in an area of Australia south of latitude 26° south must not be sourced for export to the Middle East from May to October unless an agreed livestock heat stress risk assessment indicates that the risk is manageable. [less than a 2% risk of 5% mortality]

Number	Standard														
S1.6	Sheep must not be sourced for export from or through the ports of Darwin, Weipa or Wyndham from 1 November to 31 May in the following year (inclusive).														
S1.7	Livestock sourced for export must be fit to enter the export chain. Livestock sourced for export must be inspected on-farm and any animal showing signs consistent with the rejection criteria below, or any other condition that could cause the animal's health and welfare to decline during transport or export preparation, must not be prepared for export. Such conditions include those shown below:														
	<table border="1"> <thead> <tr> <th>Category</th> <th>Rejection criteria</th> </tr> </thead> <tbody> <tr> <td>General requirements</td> <td>Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating animals with young at foot (but this does not apply to livestock being exported by air) Lactating animals Pregnancy status not confirmed as appropriate for journey</td> </tr> <tr> <td>Systemic conditions</td> <td>Emaciated or over fat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift</td> </tr> <tr> <td>Musculoskeletal system</td> <td>Lameness or abnormal gait Abnormal soft tissue or bony swellings</td> </tr> <tr> <td>Gastrointestinal system</td> <td>Dysentery or profuse diarrhoea Bloat</td> </tr> <tr> <td>Nervous system</td> <td>Nervous symptoms (head tilt, circling, incoordination) Abnormal or aggressive behaviour/intractable or violent</td> </tr> <tr> <td>External/skin</td> <td>Generalised papillomatosis or</td> </tr> </tbody> </table>	Category	Rejection criteria	General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating animals with young at foot (but this does not apply to livestock being exported by air) Lactating animals Pregnancy status not confirmed as appropriate for journey	Systemic conditions	Emaciated or over fat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift	Musculoskeletal system	Lameness or abnormal gait Abnormal soft tissue or bony swellings	Gastrointestinal system	Dysentery or profuse diarrhoea Bloat	Nervous system	Nervous symptoms (head tilt, circling, incoordination) Abnormal or aggressive behaviour/intractable or violent	External/skin	Generalised papillomatosis or
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External/skin	Generalised papillomatosis or														

Number	Standard
	generalised ringworm, dermatophilosis Generalised and extensive buffalo fly lesions Generalised skin disease Visible external parasites Significant lacerations Discharging wounds or abscesses Cutaneous myiasis (flystrike) Ballanitis (pizzle rot in sheep) Blood/discharge from reproductive tract (vulva/prepuce)
Head	Blindness in one or both eyes Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Coughing Respiratory distress — difficulty breathing Untipped sharp horns Cattle: horns longer than 12 cm, except in approved NOI and CRMP Buffalo: horns longer than the spread of the ears, except in approved NOI and CRMP Sheep: long horns greater than one curl, except in approved NOI and CRMP Horns causing damage to head or eyes Deer: hard antlers longer than 5 cm Bleeding horn/antler stumps Broken antlers In velvet exceeding 10 cm in length Scabby mouth
Other	Mobs with unusual mortalities over the whole period of pre-export

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Number	Standard
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isolation

Large disparities in size or age (redraft animals in this case)

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- S1.8 Livestock must not be sourced for export if they are in an emaciated or overfat body condition. That is:
- (a) cattle and buffalo must be from condition scores 2 to 6 (inclusive) on a scale of 1 to 7;
  - (b) pregnant cattle must be from condition scores 3 to 6 (inclusive) on a scale of 1 to 7;
  - (c) sheep, goats and deer must be from condition scores 2 to 4 (inclusive) on a scale of 1 to 5; and
  - (d) camels must be from condition scores 2 to 4 (inclusive) on a scale of 1 to 5.
  - (e) alpacas must be from condition scores 2 to 4 on a scale of 1 to 5.

See Appendix 1.1

- S1.9 Cattle and buffalo sourced for export as slaughter and feeder animals:
- (a) must have been weaned at least 14 days before sourcing for export;
  - (b) must have an individual liveweight of more than 200 kg and less than 650 kg or, if outside these weights, have written prior approval from the relevant Australian Government agency;
  - (c) must have been determined not to be pregnant, using the following criteria:
    - (i) have been pregnancy tested during the 30 day period before export and certified in writing as not detectably pregnant by the registered veterinarian or competent pregnancy tester who pregnancy tested the cattle or buffalo; or
    - (ii) be accompanied by a vendor declaration that certifies that they have been spayed using the Willis dropped ovary technique not less than 30 days before export; or
    - (iii) be accompanied by a vendor declaration that certifies that they have been spayed not less than 280 days before export.

For this standard, a *competent pregnancy tester*, for a



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<b>Number</b>	<b>Standard</b>
	pregnancy test conducted in: <ul style="list-style-type: none"><li>(d) the Northern Territory — is a person accredited by the relevant agency of the Northern Territory to conduct pregnancy tests; and</li><li>(e) Western Australia — is a person accredited by the relevant agency of Western Australia to conduct pregnancy tests.</li></ul>
S1.10	<p>Cattle and buffalo must only be sourced for export for breeding if they:</p> <ul style="list-style-type: none"><li>(a) have been weaned at least 14 days before sourcing for export;</li><li>(b) have an individual liveweight of more than 200 kg and less than 650 kg or, if outside these weights, have written prior approval from the relevant Australian Government agency;</li><li>(c) have been pregnancy tested within the 30 day period before export and certified in writing as no more than a maximum of 190 days pregnant for cattle and 220 days pregnant for buffalo at the scheduled date of departure. The certification must be provided by a veterinarian who is a member of the Australian Cattle Veterinarians and an accredited tester under the National Cattle Pregnancy Diagnosis Scheme and who pregnancy tested the cattle or buffalo. For journeys of less than 10 days a declaration must be made in writing by a registered veterinarian who can attest to demonstrable current experience and who pregnancy tested the cattle or buffalo.</li></ul> <p>If the veterinarian:</p> <ul style="list-style-type: none"><li>(i) is accredited under the National Cattle Pregnancy Diagnosis Scheme; and</li><li>(ii) determines that cattle or buffalo are too small to be manually palpated safely;</li></ul> <p>the veterinarian may base this certification on assessment of the animals by a method other than manual palpation.</p>
S1.11	<p>Ewes with a weight of 40 kg or more and all does (goats) must only be sourced for export as slaughter and feeder animals if they have been pregnancy tested by ultrasound</p>

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Number	Standard
	<p>within 30 days of export and certified not to be pregnant, by written declaration, by a person able to demonstrate a suitable level of experience and skill.</p> <p>(a) all female Damara sheep breeds sourced as feeder or slaughter must be pregnancy tested within 30 days of export by ultrasound and certified not to be pregnant, by written declaration, by a person able to demonstrate a suitable level of experience and skill.</p>
S1.12	<p>Unless approved by the relevant Australian Government agency, lambs and goat kids must only be sourced for export if:</p> <p>(a) they have been weaned at least 14 days before sourcing for export;</p> <p>(b) lambs have a liveweight of more than 28 kg; and</p> <p>(c) goat kids have a liveweight of more than 22 kg.</p>
S1.13	<p>Sheep and goats sourced for breeding must only be sourced for export if they have been pregnancy tested using ultrasound foetal measurement within 30 days of export and certified, by written declaration, by a person able to demonstrate a suitable level of experience and skill, to be not more than a maximum of 100 days pregnant at the scheduled date of departure.</p>
S1.13A	<p>Alpacas and llamas sourced for breeding must only be sourced for export if they have been pregnancy tested using ultrasound within 30 days of export and certified, by written declaration, by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis, to be not more than a maximum of 228 +/- 2 days pregnant at the scheduled date of departure.</p>
S1.14	<p>Deer sourced as slaughter and feeder animals must only be sourced for export if they have been pregnancy tested by ultrasound within 30 days of export and certified, by written declaration, by a person able to demonstrate a suitable level of experience and skill, not to be pregnant.</p>
S1.14A	<p>Deer sourced for breeding must only be sourced for export if they have been pregnancy tested by ultrasound foetal measurement within 30 days of export and certified, by written declaration, by a person able to demonstrate a suitable level of experience and skill, to be not more than a maximum of 140 days pregnant at the</p>

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<b>Number</b>	<b>Standard</b>
	scheduled date of departure.
S1.15	<p>Horned cattle and buffalo must only be sourced for export as slaughter and feeder animals:</p> <ul style="list-style-type: none"><li>(a) for cattle, if the horns are 12 cm or less in length and tipped (blunt);</li><li>(b) for buffalo, if the horns are no longer than the spread of the ears and are blunt; and</li><li>(c) if de-horned, wounds are healed.</li></ul> <p>Otherwise, horned cattle and buffalo must only be sourced for export with the approval of the relevant Australian Government agency.</p>
S1.16	<p>Horned sheep or rams must only be sourced for export as slaughter and feeder animals if the horns:</p> <ul style="list-style-type: none"><li>(a) are not turned in so as to cause damage to the head or eyes;</li><li>(b) would not endanger other animals during transport;</li><li>(c) would not restrict access to feed or water during transport; and</li><li>(d) are one full curl or less, or are tipped back to one full curl or less.</li></ul> <p>Otherwise, horned sheep or rams must only be sourced for export with the approval of the relevant Australian Government agency.</p>
S1.17	<p>Horned goats must only be sourced for export as slaughter and feeder animals if the horns:</p> <ul style="list-style-type: none"><li>(a) are not turned in so as to cause damage to the head or eyes;</li><li>(b) would not endanger other animals during transport;</li><li>(c) would not restrict access to feed or water during transport; and</li><li>(d) Are no more than 15 cm long and blunt or are no more than 22 cm long with tips no more than 20 cm apart.</li></ul> <p>Otherwise, horned goats must only be sourced for export with the approval of the relevant Australian Government agency.</p>
S1.19	<p>Sheep must only be sourced for export if they:</p>

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Number	Standard
	<ul style="list-style-type: none"><li>(a) have wool not more than 25 mm in length, unless approved by the relevant Australian Government agency based on an agreed heat stress risk assessment model; and</li><li>(b) are 10 days or more off shears; or</li><li>(c) are to be shorn during the 10 day period before export, in which case they must be accommodated in sheds on the registered premises.</li></ul>
S1.20	Goats must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days before transfer to registered premises.
S1.21	Deer must only be sourced for export if they: <ul style="list-style-type: none"><li>(a) are at least 6 months old;</li><li>(b) have been weaned for at least 2 months before sourcing for export; and</li><li>(c) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days.</li></ul>
S1.22	Male deer must only be sourced for export if: <ul style="list-style-type: none"><li>(a) they have had hard antler removed leaving only buttons;</li><li>(b) they are not in the first week after velveting;</li><li>(c) velveting wounds have healed; and</li><li>(d) they are not in rut, if they are over 1 year of age.</li></ul>
S1.23	Camels, including wild-caught camels, must only be sourced for export if they: <ul style="list-style-type: none"><li>(a) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days; and</li><li>(b) meet transport and shipping height requirements of the intended transport (ie camels standing in their natural position do not touch any overhead structures).</li></ul> <p>Bull camels that are more than 5 years of age and are in rut must not be sourced for export in the period 1 May and 30 September.</p>

Number	Standard
S1.25	A record of all vaccines, veterinary medicines and agricultural chemicals used to vaccinate or treat livestock sourced for export must be kept for at least 2 years after the date of export.
S1.26	Female livestock must not be treated with a prostaglandin drug within 14 days of export, and not during the 60 day period before export unless they have been pregnancy tested immediately before prostaglandin treatment and declared to be in the first trimester of pregnancy or not detectably pregnant.
S1.27	Livestock sourced for export that become sick or injured during on-farm preparation must be excluded from export, and arrangements must be made for their prompt and humane handling and care.

### Division 3 Appendixes

#### Appendix 1.1 — Body condition score for livestock

##### 1.1.1 Sheep and goats

**Table A1.1.1 Body condition scores for sheep and goats**

Score	Backbone	Short ribs	Eye muscle
1	Prominent and sharp	Ends are sharp and easy to press between, over and around	Thin, the surface tending to feel hollow
2	Prominent but smooth	Smooth, well-rounded ends — can feel between, over and around each smoothly	Reasonable depth with the surface tending to feel flat
3	Can be felt, but smooth and rounded	Ends are smooth and well covered — firm	Full and rounded

Score	Backbone	Short ribs	Eye muscle
		pressure is necessary to feel under and between short ribs	
4	Detectable with pressure on the thumb	Individual short ribs can only be felt with firm pressure	Full with a covering layer of fat
5	Can be felt with firm pressure	Cannot be felt even with firm pressure	Muscle cannot be felt due to a thick layer of fat

### 1.1.2 Cattle

**Table A1.1.2 Body condition scores for cattle**

Standard		Optional	
Score	Fat depth (mm) at P8 site	Score	Fat depth (mm) at P8 site
1	0–2		
2	3–6	2 Low (L)	3–4
		2 High (H)	5–6
3	7–12	3 L	7–9
		3 H	10–12
4	13–22	4 L	13–17
		4 H	18–22
5	23–32	5 L	23–27
		5 H	28–32
6	33–42	6 L	33–37
		6 H	38–42
7	> 42	7 L	> 42
		7 H	

### 1.1.3 Deer

- (1) These charts have been cooperatively developed for the Australian deer industry by project funding from the Rural Industries Research and Development Corporation, the South Australian Department of Primary Industries and Resources and the University of Western Sydney. They are intended as a guide and may be amended in the future if new information becomes available. The charts have been developed to help Australian deer farmers and processors to assess the body condition of deer objectively. Body condition may influence many aspects of deer production and profitability, including reproductive performance, susceptibility to disease and returns from processed animals.

**Note.** These charts are available from the RIRDC website: <http://www.rirdc.gov.au>.

- (2) Body condition scoring is based on palpation of the spine, pelvis and rump of live animals. The simple scoring system varies from score 1 (emaciated) to 5 (overfat) and relates directly to carcass condition scores.

**Table A1.1.3 Body condition scores for deer**


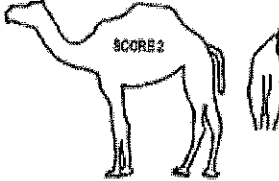
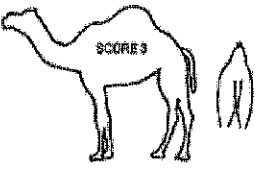
Score	Description	Pelvis, ribs and spine	Rump area
1	Emaciated — no fat cover	Prominent	Concave
2	Lean — minimal fat cover	Prominent but appear rounded rather than sharp	Slightly concave
3	Prime — ideal fat cover	Not readily distinguished	Flat
4	Fat — fat (some trimming necessary)	Pelvis rounded, spine covered by fat	Rounded
5	Overfat — overfat (excessive trimming required)	Pelvis concealed by fat, spine hard to palpate	Very convex

### 1.1.4 Camels

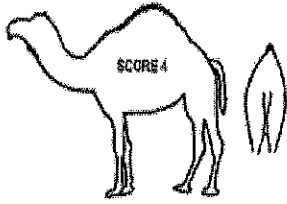

- (1) The condition of a camel is estimated by looking at the store of body fat (ie the hump). This reflects the internal fat reserves and provides a good correlation with total body fat. The camel deposits excess energy as fat into the hump sac and into some internal linings. This contrasts with the energy reserves of other species, in which fat is deposited into the subcutaneous tissues and internal linings and within the muscles.

Note. See <http://www.camelsaust.com.au/livebodycond.htm>

**Table A1.1.4 Body condition scores for camels based on the amount of fat in the hump**

Score	Description	Illustration
1	Little or no fat in the hump sac; hump hairy and may be leaning to one side	
2	Hump with moderate development rising 5% higher than chest depth, but may also be leaning to one side	
3	Hump with good development and rising to 10% higher than chest depth. Hump is still sculptured inwards on both sides and still fits over the chest and abdominal area	

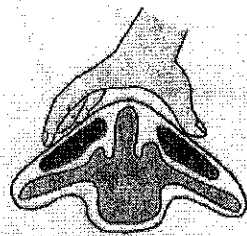


Score	Description	Illustration
4	Hump fully developed and rising to 15% higher than chest depth. Hump rounded outwards on both sides and runs from the shoulder to the rump	
5	Hump overextended and rising more than 15% higher than chest, or so full that it is rounded on the sides like a semicircle	

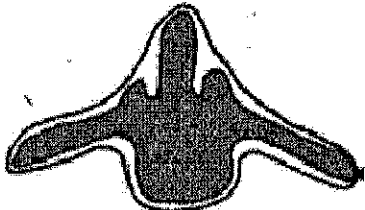
### 1.1.5 Alpacas

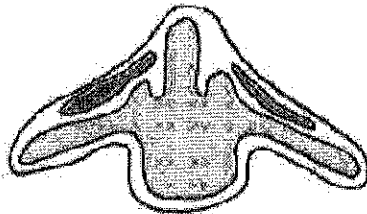
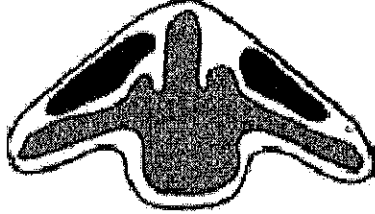
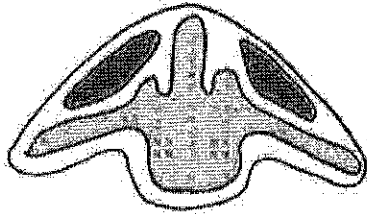
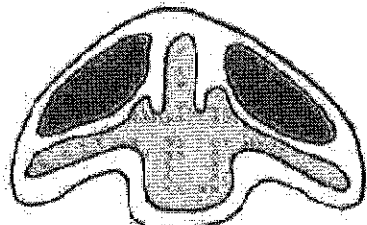
Note. See <http://www.alpaca.asn.au/>.

**Table A1.1.5 Body condition scores for alpacas**



The picture on the left is an example of how to body score an alpaca by placing your hand on the backbone, just forward of the pelvic area (or toward the last of the ribs).

Score	Description	Illustration
1	Severely concave between spine and ribs. The backbone is very noticeable, ribs are clearly felt and brisket shows no fat.	

Score	Description	Illustration
2	Slightly concave between spine and ribs. You can feel backbone, ribs are noticeable and brisket is firm.	
3	Neither concave nor convex between spine and ribs. You can feel the backbone, but it does stand out and you can just feel the ribs and the brisket.	
4	Slightly convex between spine and ribs. You can feel the backbone, but it does not stand out and you can just feel the ribs and the brisket.	
5	Severely concave between spine and ribs, the top of the back feels flat. You can not feel backbone or ribs, brisket wobbles when touched.	

### 1.1.6 Buffalo

**Note.** Body condition scores for buffalo are under development.

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## **Standard 2      Land transport of livestock**

### **Division 1      Preliminary**

#### **2.1      Guiding principle**

Land transport is planned and is undertaken on a competently operated and suitable vehicle, with the livestock being handled in a manner that prevents injury and minimises stress throughout the journey.

#### **2.2      Required outcomes**

- (1) Only livestock fit to travel are presented for loading.
- (2) Livestock are loaded in a manner that prevents injury and minimises stress.
- (3) Transport of livestock is undertaken in a manner that meets these Standards, any requirements of a state or territory relating to the transport of livestock, and importing country requirements.
- (4) Livestock are unloaded in a manner that prevents injury and minimises stress.

#### **2.3      Overview**

- (1) The health and welfare requirements of livestock must be addressed throughout the whole of the land transport phase in the export chain. Livestock presented for land transport must be fit to travel and accompanied by documentation that allows the livestock to be traced to their property of source.
- (2) The land transport phase begins when the first animal is mustered and ends when the last animal is unloaded at the end of the journey. It includes:
  - (a) pre-loading mustering and yarding;
  - (b) any stationary resting or holding periods;

- (c) transport of livestock from the property of source to registered premises; and
  - (d) subsequent transport from registered premises to a point of embarkation.
- (3) The maximum acceptable travel times vary for different species, and these are described in the appendices to these Standards (Appendixes 2.1 and 2.2). Livestock should not be permitted to begin a new journey until they have had sufficient rest and recuperation time, with the provision of adequate and suitable feed and water.
- (4) The immediate responsibility for the health or welfare of livestock during the land transport phase is as follows:
- (5) Transport operators are responsible for ensuring that vehicles are of appropriate design for the type of livestock being transported, and are appropriately maintained. Operators must plan the journey to ensure that it complies with these Standards including any relevant requirements for animal health and welfare and road transport under state or territory legislation and model codes of practice, such as requirements relating to the length of journey, stocking density, rest periods and access to suitable feed and water. Details of the journey, any incidents during the journey and any animal care provided that could affect the livestock's health and welfare need to be accurately documented by the vehicle driver.
- (6) Livestock handlers have a responsibility for the humane handling and care of livestock, especially during loading and unloading.
- (7) The vehicle driver accepts responsibility for the livestock at the point of loading and transfers this responsibility to a suitable person at the driver's destination. The driver must provide details of any aspect of the journey that might affect the future health and welfare of the livestock.
- (8) Others with responsibilities for the health and welfare of livestock during the land transport phase are as follows:
- (a) Exporters of livestock are responsible for the general health and welfare of the livestock until they are loaded.

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They are also responsible for the livestock's fitness for the intended land transport.

- (b) Exporters of livestock must ensure that livestock selected are fit to travel. Agents of exporters have a joint responsibility at the start and at the end of the journey to ensure the availability of suitable facilities for the assembly, loading, transport, and unloading and holding of livestock. Agents are also jointly responsible for dealing with emergencies.
  - (c) Exporters must be able to demonstrate that the transport of the livestock complies with these Standards, importing country requirements, and any relevant risk mitigation measures documented or referred to in the approved consignment risk management plan.
- (9) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a State or Territory. State and Territory governments are responsible for ensuring that these jurisdictional requirements are met under respective State and Territory legislation. AQIS must be satisfied that importing country requirements and these Standards have been met before issuing a health certificate and export permit.

*Note.* Further details regarding roles and responsibilities and the export chain process is outlined in the *Australian Position Statement on the Export of Livestock* ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

## **2.4 Linkages to other parts of the live export chain**

Livestock that are sourced and prepared to meet these Standards and importing country requirements must be fit to travel when presented for land transport to registered premises.

## **2.5 Definitions**

In this Standard:

*AQIS* means the Australian Quarantine and Inspection Service.

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## Division 2 Standard for land transport of livestock for export

### 2.6 Standard for land transport of livestock for export

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Number	Standard
S2.1	The land transport of livestock for export must meet any relevant animal health and welfare and road transport requirements under state and territory legislation and relevant requirements under national Model Codes of Practice for the Welfare of Animals.
S2.2	The land transport must meet any importing country requirements for the land transport phase in the export chain.
S2.3	<p>The land transport must be undertaken in accordance with a travel plan. This travel plan must be completed for all interstate journeys greater than 2 hours and journeys of more than 8 hours duration.</p> <p>Each plan must address the following:</p> <ul style="list-style-type: none"><li>(a) species, class, condition and number of livestock;</li><li>(b) transport vehicles;</li><li>(c) loading densities and penning requirements;</li><li>(d) duration of the journey, including rest periods for driver and livestock;</li><li>(e) the method of loading and unloading of the livestock;</li><li>(f) inspection of livestock before loading;</li><li>(g) the feed and water requirements and curfew times applicable to the livestock under this Standard, including to livestock sourced from saleyards;</li><li>(h) the expected weather conditions before and during transport;</li><li>(i) the route and the types of roads traversed;</li><li>(k) completion of vendor declarations or waybill regarding the property of source and the time of departure; and</li><li>(l) contingency plans for managing transport breakdown, accidents, escapes, deaths, downers and injuries.</li></ul>

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Number	Standard
S2.4	Livestock must be prepared for land transportation from the property of source in line with requirements outlined in Appendix 2.3.
S2.8	The following feed and water curfews must be observed for livestock before their loading for land transport from the property of source: <ul style="list-style-type: none"><li>(b) livestock on green feed must be held off green feed (but may be given access to dry feed) for at least 12 hours; and</li><li>(c) livestock may be held off water (but may be given access to dry feed) for up to 12 hours.</li></ul>
S2.9	Livestock must not be deprived of water beyond the limits specified for each species and class of animal in Appendix 2.1.
S2.10	When livestock are loaded for transport by land: <ul style="list-style-type: none"><li>(a) animals of different species must not be mixed in a single pen;</li><li>(b) classes of animals of the same species must not be mixed;</li><li>(c) young animals must be separated from older animals;</li><li>(d) animals of a dissimilar size must be separated; and</li><li>(e) Cattle lacking horns may be mixed with cattle with horns up to 12cm in length and tipped (blunt);</li></ul> Sheep lacking horns may be mixed with sheep with horns up to one curl in length and of such a shape as not to cause eye damage; Goats lacking horns may be mixed with goats with horns up to 22 cm in length.
S2.11	Livestock must be inspected prior to loading and any animal showing signs consistent with the rejection criteria in Standard S1.7 of <i>Standard 1 – Sourcing and on farm preparation of livestock</i> , or any other condition that could cause the animal's health and welfare to decline during transport or export preparation, must not be transported.
S2.12	Livestock must not be loaded until the travel plan is completed. The following documentation must accompany each load of the consignment:

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Number	Standard
	<ul style="list-style-type: none"><li>(b) a signed declaration as to the identification of the livestock and the property of source; and</li><li>(d) a journey log that commences at loading, is maintained through the journey and finalised on completion of unloading, and is used to record the actual journey details.</li></ul> <p>The livestock transport driver must be aware of the travel plan prior to commencement of the journey.</p> <p>The documentation relating to each consignment must be kept for at least 2 years after the date of export.</p>
S2.13	<p>Livestock must be loaded in a manner that prevents injury and minimises stress. In particular:</p> <ul style="list-style-type: none"><li>(a) the use of electric prods must be restricted to the minimum necessary to assist loading, and be in accordance with state/territory legislation. Electric prods must not be applied to the face or ano-genital area. Prods are not to be used for camelids or deer;</li><li>(b) where animals need to be lifted to assist loading, they must not be lifted by the skin or wool.</li><li>(c) ‘metallic rattles’ can be used for livestock to encourage movement in response to sound and, if necessary, polypipe may be used humanely to persuade animals to move; and</li><li>(d) well-trained dogs may be used to help with the loading of livestock (other than camelids and deer). Dogs must be muzzled. The number of dogs used should be the minimum necessary to complete the task.</li></ul>
S2.14	<p>Loading density and penning arrangements for land transport must conform to stocking densities and penning arrangements as given in Appendix 2.2.</p>
S2.15	<p>At loading for land transport, the person responsible for the land transport vehicle must assume responsibility for the livestock.</p>
S2.16	<p>Livestock must be checked to ensure that they are evenly distributed and remain fit to travel:</p> <ul style="list-style-type: none"><li>(a) immediately before departure;</li><li>(b) within 30–60 minutes of commencement of the journey;</li></ul>

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Number	Standard
	(c) at least every 2–3 hours as road conditions warrant; and (d) immediately before departure after any stop.
S2.17	Working dogs must not be transported in the same pen as livestock.
S2.18	Livestock must be unloaded and rested in suitable facilities and offered food and water at appropriate intervals during the journey, as specified in Appendix 2.1 and in accordance with state/territory legislation.
S2.19	At unloading, livestock become the responsibility of the person designated with responsibility for the livestock at the registered premises. That person must be notified of any aspect of the journey that might affect the future welfare of the livestock.
S2.20	Livestock that are distressed or injured at unloading must be given immediate assistance. If euthanasia is necessary, it must be carried out humanely.  <b>Note.</b> An appendix on euthanasia is under development
S2.21	Livestock must be unloaded into registered premises to rest and adapt for their export journey if the duration of the land transport journey is more than 14 hours.
S2.22	Livestock must be unloaded into the registered premises by competent stock handlers in a manner that prevents injury and minimises stress. Facilities must be designed, constructed and maintained to enable safe and efficient unloading of livestock.
S2.24	All relevant standards for the land transport of livestock for export relating to loading, handling during transport and unloading must also be applied to transport from the registered premises to the port of export.

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## Division 3      Appendixes

### Appendix 2.1      Maximum water deprivation times and rest periods for livestock

#### 2.1.1      Water deprivation times generally

- (1) The time limit for any given journey by livestock and the requirement for rest periods are primarily determined by the maximum time that animals can be deprived of access to adequate water of a quality to maintain good health and welfare. This is termed the *water deprivation time*.
- (2) The water deprivation time is the total continuous period of water deprivation, starting when stock last had access to water, and must include:
  - (a) time off water during mustering;
  - (b) time off water when yarded after mustering;
  - (c) curfew or 'empty out' time (see below);
  - (d) all time on the vehicle, whether moving or stationary; and
  - (e) any time without water after unloading, such as at a saleyard, spelling centre or registered premises.
- (3) *Curfew* or *empty out* time is the deliberate and variable period of water and/or 'green' fresh feed deprivation intended to minimise faecal and urine spoilage of the transport vehicle, subsequent problems with animals slipping, and contamination of the environment.
- (4) The maximum water deprivation times and rest period requirements are described below.
- (5) If animals of any species become dehydrated, precautions need to be taken to ensure that they do not gorge themselves when given access to water.

#### 2.1.2      Cattle

- (1) The *Australian Model Code of Practice for the Land Transportation of Cattle* gives water deprivation times for

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different classes of cattle. Live export by sea involves mature stock weighing at least 200 kg.

**Table A2.1.1 Maximum water deprivation times for cattle**

	Normal time	Extended time
Mature stock	36 hours	48 hours

*Extended water deprivation times*

- (2) Extended water deprivation times are permissible if and only if:
- (a) animals are travelling well and not showing signs of fatigue, thirst or distress;
  - (b) adverse weather conditions are neither prevailing nor predicted;
  - (c) the extension will allow the journey to be completed within a 48 hour period of water deprivation, and the animals are to be rested with water and feed for at least 18 hours immediately upon arrival at the registered premises; and
  - (d) the journey's duration, excluding time off water before loading onto the transport vehicle, is less than 14 hours.

*Rest periods*

- (3) Cattle older than 6 months must be spelled for 12 to 24 hours after each 36 hours water deprivation time for a normal journey, or for 36 hours after journeys of 36 to 48 hours.

### **2.1.3 Buffalo**

- (1) The standard cattle transport times and water consumption rates are generally a good guide for buffalo; however, there is no permissible time off water before transport for buffalo. The thicker hide of buffalo prevents them from dissipating body heat as readily as other species. If animals become agitated during loading or unloading, or are held on stationary transport for an extended period, regular spraying with water to cool them is the best way to prevent stress or reduce stress levels.

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- (2) Frequent cooling down with a water spray, or transport in the cooler times of the day, is appropriate in hot and humid weather.

#### 2.1.4 Sheep

**Table A2.1.2 Maximum water deprivation times for sheep**

	Normal time	Extended time
Mature stock	32 hours	38 hours
Young stock (less than 6 months old)	20 hours	28 hours

*Extended water deprivation times*

- (2) Extended water deprivation times are permissible if and only if:
- (a) animals are travelling well and not showing signs of fatigue, thirst or distress;
  - (b) adverse weather conditions are neither prevailing nor predicted;
  - (c) the extension will allow the journey to be completed within the extended time and animals to be rested with feed and water for at least 12 hours immediately upon arrival at the registered premises; and
  - (d) the journey's duration, excluding time off water before loading onto the transport vehicle, is less than 14 hours.

*Mustering and loading*

- (3) Feed and adequate water of a quality to maintain good health must be provided between mustering and loading if:
- (a) sheep are to remain in the yards for more than 24 hours;
  - (b) sheep are to travel for 24 hours or more; or
  - (c) the combined yarding and travel time is to be more than the time nominated in Table A2.1.2.

*Rest periods*

- (4) After each 32 hours of combined curfew and travel, adult sheep must have a rest period of at least 12 hours.

- (5) Animals between weaning and 12 months of age must have a rest period of at least 12 hours after every 20 hours of transport, unless the entire journey can be completed within a total of 28 hours.
- (6) During every specified rest period, sheep of all ages must:
  - (a) be unloaded;
  - (b) have access to food and adequate water of a quality to maintain good health, which may be withdrawn during the curfew period of up to a maximum of 8 hours before reloading; and
  - (c) have enough space for exercise and rest.

### 2.1.5 Goats

**Table A2.1.3 Maximum water deprivation times for goats**

	Normal time	Extended time
Mature goats	32 hours	38 hours
Young goats (less than 12 months old)	20 hours	28 hours

*Extended water deprivation times*

- (1) Extended water deprivation times are permissible if and only if:
  - (a) animals are travelling well and not showing signs of fatigue, thirst or distress;
  - (b) adverse weather conditions are neither prevailing nor predicted;
  - (c) the extension will allow the entire journey to be completed within the extended time, and animals to be rested with feed and water for at least 12 hours immediately upon arrival at the registered premises; and
  - (d) the journey's duration, excluding time off water before loading onto a transport vehicle, is less than 14 hours.

*Rest periods*

- (2) After each 32 hours of combined curfew and travel, adult goats must have a rest period of at least 12 hours.

- (3) Animals between weaning and 12 months of age must have a rest period of at least 12 hours after every 20 hours of transport, unless the entire journey can be completed within a total of 28 hours.
- (4) During every specified rest period, goats of all ages must:
  - (a) be unloaded;
  - (b) have access to food and adequate water of a quality to maintain good health, which may be withdrawn during the curfew period of up to a maximum of 8 hours before reloading; and
  - (c) have enough space for exercise and rest.

#### **2.1.6 Camelids**

Camels may be transported for a maximum of 3 days (72 hours) in suitably constructed transports which allow daily feeding and watering. Adequate water of a quality to maintain good health must be available daily. It is often preferable to leave the camels in the truck without unloading and loading. Parking under shade should be considered if conditions are excessively hot. If tying up is required, camels must be released and allowed to stand at least every 4 hours.

#### **2.1.7 Deer**

**Note.** Standards for rest periods for deer are under development.

### **Appendix 2.2      Loading densities and penning arrangements for livestock of various liveweights**

#### **2.2.1 Loading densities generally**

- (1) The land transport of livestock for export must meet any relevant animal health and welfare and road transport requirements under state and territory legislation and relevant requirements under national Model Codes of Practice for the Welfare of Animals.

- (2) Loading density and penning arrangements for the land transport of livestock must conform to stocking densities and penning arrangements given below.
- (3) Loading densities are determined according to the average liveweight, condition, size, shape and horn status of the livestock, as well as the prevailing conditions and the distance animals are to be transported.
- (4) Numbers in the tables below may be varied, provided the welfare of the livestock is not compromised and the following principles are applied:
  - (a) loading rates must be assessed for each pen or division in the stock crate;
  - (b) 5% fewer livestock should be loaded if livestock are horned;
  - (c) in hilly and more populated areas, where road vehicles change speed more frequently, sufficient internal partitions must be used and numbers varied accordingly; and
  - (d) when fewer livestock per pen than in the tables below are transported, firmly fixed portable partitions must be used.

## 2.2.2 Cattle

**Table A2.2.1 Loading densities for cattle**

Mean liveweight (kg)	Floor area (m <sup>2</sup> /head)	Head/pen length (12.5 m × 2.4 m deck)
250	0.77	38
300	0.86	34
350	0.98	30
400	1.05	28
450	1.13	26
500	1.23	24
550	1.34	22
600	1.47	20
650	1.63	18

### 2.2.3 Buffalo

**Table A2.2.2 Loading densities for buffalo**

Mean liveweight (kg)	Floor area (m <sup>2</sup> /head)	Head/pen length (12.5 m × 2.4 m deck)
250	0.79	37
300	0.89	33
350	1.01	29
400	1.09	27
450	1.18	25
500	1.28	23
550	1.40	21
600	1.55	19
650	1.73	17

Note. Calculations of the above buffalo numbers have been based on animals with horns that are no longer than the spread of the ears and are blunt.

### 2.2.4 Sheep

**Table A2.2.3 Loading densities for sheep**

Mean liveweight (kg)	Floor area (m <sup>2</sup> /head)	Head/pen length (2.4 m wide tray)		
		3.0 m	4.5 m	6 m
20	0.17	42	63	85
30	0.19	38	57	76
40	0.22	33	49	65
50	0.25	29	43	57
60	0.29	25	37	49

- (1) Calculations of the above sheep numbers have been based on animals in half-wool.



- (2) When transporting full-wool sheep, the number should be reduced accordingly; when transporting newly shorn sheep, it should be increased accordingly.

## 2.2.5 Goats

**Table A2.2.4 Loading densities for goats**

Mean liveweight (kg)	Floor area (m <sup>2</sup> /head)	Head/pen length (2.4 m wide tray)		
		3.0 m	4.5 m	6 m
20	0.117	62	92	123
30	0.165	44	65	87
40	0.213	34	51	68
50	0.261	28	41	55
60	0.309	23	35	47

- (1) Large-horned animals require additional space depending on the size of horns.

## Camels

**Table A2.2.5 Loading densities for camels**

Mean liveweight (kg)	Head/pen length	
	5 m x 2.4 m deck	12.2 m x 2.4 m deck
< 250	12	26
250–300	10	22
350–400	9	20
> 500	8–9	18–20

**Note.** Resting hump height clearance for land transport is 100 mm. When moving, the highest part of the camel is the fat-filled hump, the head is generally lowered. Hump height will lower by 100 mm to 200 mm between the rest and walking state. Hump height is easily measured at rest by premarked levels in a race.

## **Appendix 2.3      Preparation of animals before loading for transportation, vehicle requirements and loading facilities**

### **2.3.1      Livestock preparation for transportation**

- (1) Livestock must be mustered and handled in preparation for loading in a way that maintains their health and welfare and fitness for travel. This must include:
  - (a) where the journey will take more than 24 hours, provision of suitable feed and water and rest for at least 12 hours close to the loading facility, before commencement of any curfews; and
  - (b) where livestock are mustered by helicopter or light plane, provision of suitable feed and water and rest for at least 24 hours before commencement of any curfews.
- (2) Holding areas for livestock before loading for land transport must securely contain the animals and maintain a safe environment.

### **2.3.2      Vehicle requirements**

Vehicles used for land transport of livestock must:

- (a) be registered for that purpose under a law of a state or territory;
- (b) be constructed to minimise injury and securely contain the livestock, having regard to species, class, condition and number of livestock;
- (c) have sufficient space between decks for the livestock, including horned livestock, to stand in a natural position without having contact with overhead structures;
- (d) have adequate ventilation to meet variations in climate and the needs of the animal species being transported, and an exhaust system that does not pollute the air inside the stock crate;
- (e) be constructed so that the faeces and urine from livestock on upper levels do not soil livestock on lower levels;
- (f) be regularly serviced and maintained in good mechanical and structural condition, including the stock crate; and

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- (g) be clean before the journey to minimise the risk of injury and contamination of the livestock.

### **2.3.3 Loading facilities**

- (1) Inspection of loading facilities and vehicle must be undertaken before loading at the property at which the land transport is to commence.
- (2) Loading facilities must be designed, constructed, illuminated (where night-time loading occurs) and maintained to enable safe and efficient loading of livestock, to avoid injury and to minimise stress.

## **Standard 3      Management of livestock in registered premises**

### **Division 1      Preliminary**

#### **3.1      Guiding principle**

Livestock are assembled at registered premises, where the husbandry and management practices ensure that the livestock are adequately prepared for the export voyage.

#### **3.2      Required outcomes**

- (1) Facilities at registered premises are appropriate for the type and species of livestock to be held.
- (2) The health and welfare needs of the livestock are appropriately catered for in a secure environment.
- (3) Livestock leaving the premises are fit for the export voyage and meet importing country requirements.
- (4) Livestock rejected for export are managed humanely.

#### **3.3      Overview**

- (1) The assembly of livestock for export commences with the unloading of the first animal into the premises, and ends with the departure of the last animal from the premises, whether or not passed as fit for export. Livestock must be held in secure premises for a sufficient period of time to enable recovery from land transportation and to meet importing country requirements. Preparation of livestock must comply with this Standard. Livestock must also be inspected and deemed fit to travel before leaving the premises.
- (2) Where premises are used for holding and assembling livestock for export, such premises must be registered in accordance with the legislation. Registered premises operators are responsible for the design, maintenance, security and operation of the

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premises, including the provision of appropriate shelter, feed and water supply systems, animal husbandry and care by competent animal handlers.

- (3) The exporter must be able to demonstrate to the Australian Government that the management of the livestock at the registered premises accords with the specifications set out in the risk management plan for the consignment, and the importing country requirements for registered premises.
- (4) Some classes of sheep have in the past been considered a higher risk to inattention and salmonellosis and therefore are restricted from export at certain times of the year. Specific Australian research is currently examining these issues.

*Note.* Standard S3.9 may need to be amended in the future, in response to this research.

- (5) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a state or territory. State and territory governments are responsible for ensuring that these jurisdictional requirements are met under respective state and territory legislation. AQIS must be satisfied that importing country requirements and the Standards have been met before issuing a health certificate and export permit.

*Note.* Further details regarding roles and responsibilities and the export chain process are outlined in the *Australian Position Statement on the Export of Livestock* ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

### **3.4 Linkages to other parts of the export chain**

- (1) Only fit livestock accompanied by appropriate documentation can be accepted into the registered premises.
- (2) Only livestock fit to travel, which meet importing country requirements, can be loaded for transport to the port of embarkation. Land transport arrangements to the port of embarkation must be consistent with the requirements specified under *Standard 2 — Land transport of livestock*.

### 3.5 Definitions

In this Standard:

*AQIS* means the Australian Quarantine and Inspection Service.

*clear day*, in respect of the length of time that livestock must remain in a registered premises prior to departure, does not include the days on which the livestock arrived at and departed from the premises.

*CRMP* means a consignment risk management plan.

*NOI* means a notice of intention to export.

*registered premises* are premises intended to be used for holding and assembling of livestock for export or the pre-export quarantine or isolation of livestock for export.

## Division 2 Standard for management of livestock in registered premises

### 3.6 Standard for management of livestock in registered premises

Number	Standard
S3.0	The location of the registered premises, used for inspection for 'leave for loading', must not be more than 8 hours journey time from the port of embarkation, with the exception of camels for export through northern ports, unless approved by a relevant Australian Government agency.
S3.1	The operator of registered premises must employ sufficient appropriately trained staff for the effective day-to-day operation of the premises and management of the livestock.
S3.2	Livestock handling facilities and sheds at registered premises must comply with the following: <ol style="list-style-type: none"> <li>(a) Sheds must be constructed with sufficient drainage and ventilation to ensure that the shed is free draining.</li> <li>(b) Sheds with slatted or mesh floors must be designed and maintained to prevent entrapment of feet.</li> <li>(c) Livestock handling facilities must be constructed to</li> </ol>

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Number	Standard
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|      | handle the number of livestock (ie the number of stock at the premises, whatever that may be, depending on the consignment size) with a minimum of stress and injury.  |
|      | (d) Floors of yards, sheds, pens and loading ramps must have non-slip surfaces.  |
| S3.3 | Isolation of livestock: <ul style="list-style-type: none"><li>(a) Where a period of pre-export quarantine or isolation is required by the importing country, animals forming the consignment must at all times be physically isolated from all other animals (whether for an alternative export market or domestic use) to prevent contact.</li><li>(b) Where handling facilities used for loading, holding, treating or inspecting livestock (including roadway and lanes) are to be used for both domestic and export livestock (including livestock of differing export status), the operator of the premises must have procedures in place to ensure that:<ul style="list-style-type: none"><li>(i) handling facilities are not used simultaneously by livestock of differing pre-export quarantine or isolation status;</li><li>(ii) a minimum livestock traffic separation of 2 m is maintained at all times, or livestock are separated by a physical barrier such as a fenced road or lane or a fully fenced empty paddock, unless specified otherwise by the importing country; and</li><li>(iii) handling facilities and equipment used by different consignments of animals are managed in accordance with the pre-export quarantine or isolation requirements of each importing country.</li></ul></li></ul> |
| S3.4 | To control drainage, surface water, groundwater and effluent run-off, the premises must be located or constructed in such a manner that: <ul style="list-style-type: none"><li>(a) surface water and livestock effluent are directed away from laneways, livestock handling areas, livestock confinement areas and feed storage areas;</li><li>(b) the livestock confinement area of the registered</li></ul>  |

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Number	Standard
	premises is free draining and remains firm under foot; and
	(c) the surfaces around feeders and water troughs are evenly graded and compacted to form a hard, durable surface that readily sheds surface water.
S3.5	<p>The registered premises must be either constructed or located in such a manner as to provide animals with protection from extreme climatic conditions by means of:</p> <ul style="list-style-type: none"><li>(a) shade;</li><li>(b) windbreaks;</li><li>(c) shelter; or</li><li>(d) other means approved by the registration authority.</li></ul> <p><b>Note.</b> Specific requirements may vary according to the type of registered premises, taking into account the species, class and maximum number of animals to be held at the premises and the types of operations to be carried out.</p>
S3.6	<p>Fencing at registered premises must:</p> <ul style="list-style-type: none"><li>(a) be appropriate to hold livestock and to prevent the entry of livestock;</li><li>(b) be maintained in a good state of repair;</li><li>(c) be inspected before the entry of each consignment and twice a week while livestock are in the registered premises; and</li><li>(d) be consistent with the importing country requirements.</li></ul>
S3.7	<p>To ensure adequate supply of feed and water:</p> <ul style="list-style-type: none"><li>(a) where feeders, self-feeders and water troughs are used, they must be of a design that allows for complete cleaning of all surfaces, prevents spoilage of feed during inclement weather, and minimises faecal contamination and injuries</li><li>(b) all livestock feed for use at the registered premises must be stored in a manner that maintains the integrity and nutritional value of the feed, and protects it from weather, pests and external contaminants (including chemical spray drift) and from direct access by animals</li><li>(c) where feeders and self-feeders are used, the feed</li></ul>

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|      | <p>trough allowance for sheep and goats held in paddocks at the registered premises is to be calculated on a paddock-by-paddock basis and must be:</p> <ul style="list-style-type: none"><li>(i) for ration feeding, no less than 5 cm of feed trough per head;</li><li>(ii) for ad libitum feeding, no less than 3 cm of feed trough per head;</li><li>(iii) during any or all of May, June, July, August, September and October feeding must occur from fully sheltered feed troughs, with the exception of areas of Australia north of latitude 26° south.</li></ul> <p>(e) the quantity of feed available should meet at least minimum feed requirements, which are:</p> <ul style="list-style-type: none"><li>(i) cattle/buffalo — 2.5% of their bodyweight, of a quality feed able to meet daily maintenance requirements;</li><li>(ii) sheep and goats — 3% of their bodyweight per day for sheep younger than 4 tooth and 2% of their bodyweight per day for 4 tooth or older, of a quality feed able to meet daily maintenance requirements; and</li><li>(iii) deer — 2% of their bodyweight per day of a quality feed able to meet daily maintenance requirements.</li></ul> <p>(f) all livestock in the registered premises must have access to drinking water at all times (unless under curfew)</p> <p>(g) water troughs must be:</p> <ul style="list-style-type: none"><li>(i) positioned apart from hay and feed sources to prevent fouling; and</li><li>(ii) kept clean.</li></ul> <p>(h) the water quality must be suitable for the livestock and there must be sufficient backup storage or a contingency plan to ensure continuity of supply at peak demand for 2 days.</p> |
| S3.8 | For preparation of sheep and goats in premises south of latitude 26° south that are held:  |

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Number	Standard
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|       | <ul style="list-style-type: none"><li>(a) in paddocks during any or all of May, June, July, August, September and October, premises must have procedures to ensure that:<ul style="list-style-type: none"><li>(i) sheep and goats to be exported by sea are held at the premises for 5 clear days (excluding the days of arrival and departure) before export;</li><li>(ii) livestock are fed <i>ad libitum</i> during that period; and</li><li>(iii) during the last 3 days of that period, livestock are fed <i>ad libitum</i>, but only on pelletised feed equivalent to that normally used during an export journey.</li></ul></li><li>(b) in paddocks during any or all of November, December, January, February, March and April, premises must have procedures to ensure that:<ul style="list-style-type: none"><li>(i) sheep and goats to be exported by sea are held at the premises for 3 clear days (excluding the days of arrival and departure) before export; and</li><li>(ii) livestock are fed <i>ad libitum</i> during that period and only on pelletised feed equivalent to that normally used during an export journey.</li></ul></li><li>(c) in sheds during any or all months of the year, premises must have procedures to ensure that:<ul style="list-style-type: none"><li>(i) sheep and goats to be exported by sea are held at the premises for 3 clear days (excluding the days of arrival and departure) before export; and</li><li>(ii) livestock are fed <i>ad libitum</i> during that period and only on pelletised feed equivalent to that normally used during an export journey.</li></ul></li></ul> |
| S3.8A | <p>The minimum length of time that livestock must remain in a registered premises prior to departure is as follows:</p> <ul style="list-style-type: none"><li>(a) for cattle or buffalo:<ul style="list-style-type: none"><li>(i) a long haul voyage — 2 clear days;</li><li>(ii) for a short haul voyage in a vessel with multiple port loadings or multiple port discharges — 1 clear day;</li><li>(iii) for a short haul voyage in a vessel with 1 port</li></ul></li></ul>   |

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Number	Standard
	of loading or 1 port of discharge — 24 hours; <b>Note:</b> In calculating the number of clear days exclude the first day (arrival day) and last day (departure day).
S3.9	Export to the Middle East: (a) The operator of the registered premises must not prepare the following classes of sheep for export to the Middle East by sea during the period from May to October: (i) For livestock held in paddocks: <ul style="list-style-type: none"><li>• pastoral and station sheep;</li><li>• lambs (less than 34 kg and no permanent incisors); and</li><li>• sheep and goats that have been held on trucks for more than 14 hours.</li></ul> (ii) For livestock held in paddocks or sheds: <ul style="list-style-type: none"><li>• full-mouth wethers with a body condition score greater than 4;</li><li>• broken-mouth sheep; and</li><li>• pregnant ewes.</li></ul> (b) All sheep for export to the Middle East by ship during the period from May to October held in paddocks in the registered premises must have wool not more than 25 mm in length, unless approved by the relevant Australian Government agency based on an agreed heat stress risk assessment model and must be at least 10 days off shears on arrival at the premises.
S3.10	The operator of the registered premises must have arrangements in place at the premises to prevent unauthorised entry and access to the feed when livestock are being prepared for export. Access to the premises must be controlled at all times, with: (a) all entry points to premises being clearly signed; (b) only those persons necessary for the day-to-day operation of the premises and state and territory government officials having direct access to the area of the premises; and (c) all non-employees reporting to reception for appropriate biosecurity checks relevant to the

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Number	Standard
	requirements of the facility.
S3.11	<p>Stocking density at registered premises must provide at least the following minimum space per head (cattle with horns must be provided with additional space), unless a variation is required and approved by the relevant Australian Government agency:</p> <ul style="list-style-type: none"><li>(a) for cattle or camels held for 30 days or more, a minimum of 9 m<sup>2</sup>, based on an individual liveweight of 500 kg (this allowance can be varied by 0.09 m<sup>2</sup> for each 5 kg change in individual liveweight)</li><li>(b) for cattle or camels held for less than 30 days, a minimum of 4 m<sup>2</sup>, based on an individual liveweight of 500 kg (this allowance can be varied by 0.04 m<sup>2</sup> for each 5 kg change in individual liveweight)</li><li>(c) for sheep and goats held in sheds for 10 days or more, based on an individual liveweight of 54 kg:<ul style="list-style-type: none"><li>(i) penned in groups of less than 8 animals, a minimum of 0.9 m<sup>2</sup></li><li>(ii) penned in groups of 9–15 animals, a minimum of 0.8 m<sup>2</sup></li><li>(iii) penned in groups of 16–30 animals, a minimum of 0.6 m<sup>2</sup></li><li>(iv) penned in groups of thirty-one (31) or more animals, a minimum of 0.5 m<sup>2</sup></li></ul></li><li>(d) for sheep and goats held in sheds for less than 10 days, based on an individual liveweight of 54 kg:<ul style="list-style-type: none"><li>(i) penned in groups of less than 8 animals, a minimum of 0.6 m<sup>2</sup></li><li>(ii) penned in groups of 9–15 animals, a minimum of 0.53 m<sup>2</sup></li><li>(iii) penned in groups of 16–30 animals, a minimum of 0.4 m<sup>2</sup></li><li>(iv) penned in groups of 31 or more animals, a minimum of 0.33 m<sup>2</sup>.</li></ul></li></ul>
S3.12	<p>When receiving and identifying livestock, the operator must obtain a copy of the vendor declarations regarding the property of source and health and welfare status of the</p>

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<b>Number</b>	<b>Standard</b>
	livestock before accepting the livestock for the purpose of preparation for export.
S3.13	Unloading and inspection: <ul style="list-style-type: none"><li>(a) Livestock must be unloaded as soon as possible after arrival at the registered premises. Facilities must enable safe and efficient unloading of livestock.</li><li>(b) Livestock must be individually inspected at unloading to determine whether they are suitable for preparation for export.</li><li>(c) Livestock for export must be held and assembled at the registered premises in accordance with the relevant approved NOI and CRMP.</li></ul>
S3.14	All livestock accepted into the registered premises must be offered water and feed as soon as possible and no more than 12 hours after arrival.
S3.15	Livestock must be penned in accordance with the criteria in S2.10 (a) to (e).
S3.16	Daily monitoring of health, welfare and mortality must include the following: <ul style="list-style-type: none"><li>(a) All livestock must be inspected daily by a competent stock person</li><li>(b) All sick or injured livestock must be given immediate treatment, and veterinary advice must be sought if the cause of a sickness or injury is not obvious, or if action taken to prevent or treat the problem is ineffective</li><li>(c) Investigation by a registered veterinarian must be conducted if mortalities in any one paddock or shed exceed 0.1% or 3 deaths, whichever is the greater, on any one day for cattle and buffalo, or 0.25% or 3 deaths, whichever is the greater, on any one day for any other species of livestock. Dead livestock must be collected and disposed of on a daily basis. Animals must not be able to access the area for disposal of carcasses</li><li>(d) Records of each consignment must be kept for at least 2 years after the date of export.</li></ul>
S3.17	Any livestock identified at unloading as being distressed,

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Number	Standard
	injured or otherwise unsuitable for export must be marked by a permanent method and isolated from the rest of the consignment. A record must be kept that details identity, the method of treatment or euthanasia and disposal of all rejected animals. Criteria for rejection are outlined in Appendix 3.1.

## Division 3 Appendixes

### Appendix 3.1 Rejection criteria

#### 3.1.1 Cattle and buffalo rejection criteria

- (1) Cattle or buffalo found with any of the signs shown in Table A3.1.1 must be rejected from the proposed export consignment. Any other condition that could be defined as an infectious or contagious disease, or would mean that the animal's health or welfare would decline or that the animal would suffer significant distress during transport, also requires the animal's rejection from export.
- (2) As outlined in Standard S1.7 of *Standard 1 — Sourcing and on-farm preparation of livestock*, everyone involved in the export process (operators, exporters etc) should apply these criteria.

**Table A3.1.1 Cattle and buffalo rejection criteria**

Category	Rejection criteria
General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating animals with calves at foot (but this does not apply to livestock being exported by air) Lactating cows Pregnancy status not confirmed as appropriate for journey
Systemic conditions	Emaciated or overfat

Category	Rejection criteria
	Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift
Musculoskeletal system	Lameness or abnormal gait Abnormal soft tissue or bony swellings
Gastrointestinal system	Dysentery or profuse diarrhoea Bloat
Nervous system	Nervous symptoms (head tilt, circling, incoordination) Abnormal or aggressive behaviour/intractable or violent
External/skin	Generalised papillomatosis or generalised ringworm, dermatophilosis Generalised and extensive buffalo fly lesions Visible external parasites Significant lacerations Discharging wounds or abscesses Blood/discharge from reproductive tract (vulva/prepuce)
Head	Blindness in one or both eyes Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Severe coughing Respiratory distress — difficulty breathing Horns causing damage to head or eyes Untipped sharp horns Cattle: horns longer than 12 cm, except in approved NOI and CRMP Buffalo: horns longer than the spread of the ears, except in approved NOI and CRMP Bleeding horn stumps

Category	Rejection criteria
Other	Mobs with unusual mortalities or mortalities of more than 0.5% over the whole period of pre-export preparation Large disparities in size or age (redraft animals in this case)

### 3.1.2 Sheep and goat rejection criteria

Sheep or goats found with any of the signs shown in Table A3.1.2 must be rejected from the proposed export consignment. Any other condition that could be defined as an infectious or contagious disease, or would mean that the animal's health or welfare would decline or that the animal would suffer significant distress during transport, also requires the animal's rejection from export.

**Table A3.1.2 Sheep and goat rejection criteria**

Category	Rejection criteria
General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating animals with young at foot (but this does not apply to livestock being exported by air) Lactating ewes and does Pregnancy status not confirmed as appropriate for journey
Systemic conditions	Emaciated or overfat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift
Musculoskeletal system	Lameness — footrot, foot abscess, arthritis, fractures etc or abnormal gait Abnormal soft tissue or bony swellings



Category	Rejection criteria
Gastrointestinal system	Dysentery or profuse diarrhoea Bloat
Nervous system	Nervous signs (eg head tilt, circling, incoordination) Abnormal or aggressive behaviour/intractable or violent
External/skin	Generalised skin disease Visible external parasites Cutaneous myiasis (flystrike) Significant lacerations Discharging wounds or abscesses For sheep: wool longer than 25 mm, unless approved by the relevant Australian Government agency based on an agreed heat stress risk assessment model or it has been included in an approved NOI and CRMP External skin cancer Ballanitis (pizzle rot in sheep) Blood/discharge from reproductive tract (vulva/prepuce)
Head	Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Blindness in one or both eyes Long horns greater than one curl, except in approved NOI and CRMP Horns causing damage to head or eyes Bleeding horn stumps Coughing Respiratory distress – difficulty breathing Scabby mouth

Category	Rejection criteria
Other	Mobs with unusual mortalities or mortalities of more than 0.5% over the whole period of pre-export preparation Large disparities in size or age (redraft animals in this case)

### 3.1.3 Camel rejection criteria

Camels found with any of the signs shown in Table A3.1.3 must be rejected from the proposed export consignment. Any other condition that could be defined as an infectious or contagious disease, or would mean that the camel's health or welfare would decline or that the camel would suffer significant distress during transport, also requires the animal's rejection from export.

**Table A3.1.3 Camel rejection criteria**

Category	Rejection criteria
General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating animals with young at foot (but this does not apply to livestock being exported by air) Lactating cows Pregnancy status not confirmed as appropriate for journey
Systemic conditions	Emaciated or overfat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift
Musculoskeletal system	Lameness or abnormal gait Abnormal soft tissue or bony swellings
Gastrointestinal system	Dysentery or profuse diarrhoea Bloat

Category	Rejection criteria
Nervous system	Nervous symptoms (head tilt, circling, uncoordination) Abnormal or aggressive behaviour/intractable or violent
External/skin	Generalised papillomatosis or generalised ringworm, dermatophilosis Generalised skin disease Visible external parasites Significant lacerations Discharging wounds or abscesses Cutaneous myiasis (flystrike) External skin cancer Blood/discharge from reproductive tract (vulva/prepuce)
Head	Blindness in one or both eyes Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Severe coughing Respiratory distress — difficulty breathing
Other	Mobs with unusual mortalities over the whole period of pre-export isolation Large disparities in size or age (redraft animals in this case)

#### 3.1.4 Deer rejection criteria

Deer found with any of the signs shown in Table A3.1.4 must be rejected from the proposed export consignment. Any other condition that could be defined as an infectious or contagious disease, or would mean that the deer's health or welfare would decline or that the animal would suffer significant distress during transport, also requires the animal's rejection from export.

**Table A3.1.4 Deer rejection criteria**

Category	Rejection criteria
General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Lactating does with young at foot (but this does not apply to livestock being exported by air) Lactating does Pregnancy status not confirmed as appropriate for journey
Systemic conditions	Emaciated or overfat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift
Musculoskeletal system	Lameness or abnormal gait Abnormal soft tissue or bony swellings
Gastrointestinal system	Dysentery or profuse diarrhoea Bloat
Nervous system	Nervous symptoms (head tilt, circling, incoordination) Abnormal or aggressive behaviour/intractable or violent

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External/skin	Generalised skin disease Generalised and extensive buffalo fly lesions Visible external parasites Significant lacerations Discharging wounds or abscesses Generalized papillomatosis or generalized ringworm, dermatophilosis Cutaneous myiasis External skin cancer Blood/discharge from reproductive tract (vulva/prepuce)
Head	Blindness in one or both eyes Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Severe coughing Respiratory distress — difficulty breathing In velvet exceeding 10 cm in length Bleeding antler stubs Broken antlers Hard antlers longer than 5 cm
Other	Mobs with unusual mortalities over the whole period of pre-export isolation Large disparities in size or age (redraft animals in this case)

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## **Standard 4      Vessel preparation and loading**

### **Division 1      Preliminary**

#### **4.1      Guiding principle**

The sea voyage is planned and is undertaken on an appropriately provisioned vessel certified for the carriage of livestock, and the livestock are loaded in a manner that prevents injury and minimises stress.

#### **4.2      Required outcomes**

- (1) Livestock are healthy, fit to travel and comply with importing country requirements.
- (2) The vessel meets Australian requirements for the safe carriage of livestock.
- (3) Sufficient personnel must be available both at loading and during the voyage to ensure that livestock husbandry and welfare needs are addressed.
- (4) Livestock are handled and loaded in a manner that prevents injury and minimises stress.
- (5) The travel and loading plans adequately address the health and welfare of the livestock.
- (6) A health certificate and an export permit are issued by AQIS.

#### **4.3      Overview**

- (1) AMSA is responsible for the inspection of selected foreign flag ships to monitor their compliance with safety and environment protection standards, including safe carriage of livestock as cargo.

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- (2) The master of the vessel is responsible for the vessel's loading configuration and for ensuring the safety of the vessel, crew and cargo during loading.
  - (3) Livestock vessels carry crew in sufficient numbers with experience in the care of animals to provide satisfactorily for their tending, feeding and watering, as well as assisting the accredited stock person(s) and/or veterinarian onboard in their responsibilities during the voyage.
  - (4) The loading phase begins with the arrival of livestock at the port of loading. It ends when all of the animals have been loaded onto the vessel. Once loading has been completed in accordance with the loading plan, an export permit and health certificate will be issued.
  - (5) The exporter is responsible for providing competent animal handlers to ensure that livestock are loaded in a manner that prevents injury and minimises stress, and for ensuring that suitable loading facilities are provided. The vessel owner is responsible for ensuring that the vessel is appropriately designed, constructed, equipped, maintained and certified to carry the cargo of livestock.
  - (6) The exporter must ensure that stocking densities meet all legislative requirements; that there is adequate provisioning of the vessel before departure, including feed, water and veterinary supplies; and that accredited stock persons and, when required, an accredited veterinarian have been engaged.
  - (7) The exporter must be able to demonstrate that the loading of the livestock at the port of loading has been conducted in accordance with the approved loading plan, any importing country requirements relating to the consignment and relevant requirements of the Australian Government and the state or territory for loading of livestock.
  - (8) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a state or territory. State and Territory governments are responsible for ensuring that these jurisdictional requirements are met under respective State and

Territory legislation. AQIS must be satisfied that importing country requirements and the standards have been met before issuing a health certificate and export permit.

**Note.** Further details regarding roles and responsibilities and the export chain process is outlined in the *Australian Position Statement on the Export of Livestock* ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

#### **4.4 Linkages to other parts of the export chain**

- (1) Only fit animals that comply with these Standards and importing country requirements can be transported to the port of loading for export.
- (2) Once loading begins, the master of the vessel assumes responsibility for the management and care of the livestock to the point of disembarkation. The exporter must provide details of any aspect of the preparation for export that may affect the future health and welfare of the livestock, and any relevant instructions for the care of the livestock during the voyage.

#### **4.5 Definitions**

In this Standard:

**ACCL** means an Australian Certificate for the Carriage of Livestock issued by AMSA under the Marine Orders Part 43.

**accredited stock person** means a stock person who is accredited by LiveCorp for the shipboard husbandry of livestock.

**accredited veterinarian** means a veterinarian who is accredited by AQIS to carry out duties in relation to the export of livestock.

**AMSA** means the Australian maritime Safety Authority.

**AQIS** means the Australian Quarantine and Inspection Service.

**Marine Orders Part 43** means Part 43 of the Marine Orders made under subsection 425 (1AA) of the *Navigation Act 1912*.

**PLU** means a portable livestock unit, and includes a box, platform, container or other arrangement used to form pens or stalls for the carriage of livestock.



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## Division 2 Standard for vessel preparation and loading

### 4.6 Standard for vessel preparation and loading

Number	Standard
S4.1	<p>A vessel to be used for the export of livestock must comply with:</p> <ul style="list-style-type: none"><li>(a) all Australian and international vessel biosecurity requirements; and</li><li>(b) all requirements for the safe carriage of livestock.</li></ul>
S4.1A	<p>If a ship that is permanently equipped for the carriage of livestock is to be used for the export of livestock of a particular species from a port in Australia:</p> <ul style="list-style-type: none"><li>(a) a valid ACCL must be in force for the ship; and</li><li>(b) the ACCL must specify the species of livestock to which it relates.</li></ul> <p style="text-align: center;"><b>Note.</b> As part of having a valid ACCL, the vessel must have adequate operational communication equipment to enable daily ship to-shore communications to be conducted.</p>
S4.1B	<p>If a ship that is not permanently equipped for the carriage of livestock is to be used for the export of livestock of a particular species from a port in Australia:</p> <ul style="list-style-type: none"><li>(a) the livestock must be carried in a PLU approved under Marine Orders Part 43;</li><li>(b) the PLUs and the ship must conform to the applicable requirements of Appendix 4.4; and</li><li>(c) the arrangements for the carriage of PLU's on board the ship must be approved by a surveyor appointed under section 190 of the <i>Navigation Act 1912</i> in accordance with Marine Orders Part 43.</li></ul> <p style="text-align: center;"><b>Note.</b> Under Marine Orders Part 43 (clause 37.1), portable equipment is taken to include boxes, platforms and containers. A Portable Livestock Unit is a form of portable equipment suitable for transporting livestock.</p>
S4.3	<p>Before loading of livestock for export begins, a loading plan must be prepared in accordance with the specifications in Appendix 4.1, including details of:</p> <ul style="list-style-type: none"><li>(a) the net available pen area on the ship (excluding the area of the hospital pens) according to the vessel's</li></ul>

Number	Standard
	<p>record of equipment for the carriage of livestock; and</p> <p>(b) the number of livestock that may be loaded on the vessel, based on the minimum pen area per head for the relevant livestock species and class as specified in Appendix 4.1, Tables A4.1.1–A4.1.7.</p>
S4.4	<p>Pregnant cattle/camels must be kept in pens that have an average floor area for each animal of at least:</p> <p>(a) for pregnant heifers of a <i>Bos taurus</i> breed — the minimum area required for cattle under Table A4.1.2;</p> <p>(b) for pregnant heifers of a <i>Bos indicus</i> breed — the minimum area required for cattle under Table A4.1.1;</p> <p>(c) for pregnant cows of a <i>Bos taurus</i> breed — an area 5% larger than the minimum area required for cattle under Table A4.1.2;</p> <p>(d) for pregnant cows of a <i>Bos indicus</i> breed — an area 5% larger than the minimum area required for cattle under Table A4.1.1; and</p> <p>(e) for pregnant camels — an area 5% larger than the minimum area required for camels under Table A4.1.7.</p> <p>In this standard:</p> <p><i>cow</i> means a female bovine animal that has produced a calf or is over 3 years of age.</p> <p><i>heifer</i> means a female bovine animal less than 3 years of age that has not produced a calf.</p>
S4.5	<p>An accredited stock person who is employed or contracted by the exporter and who is not ordinarily a member of the ship's crew must be appointed to accompany each consignment of livestock for export to its destination. In addition, if required by the relevant Australian Government agency, an accredited veterinarian must be appointed to accompany a consignment.</p>
S4.6	<p>Sufficient personnel must be available both at loading and during the voyage to ensure that livestock husbandry and welfare needs are addressed.</p>

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Number	Standard
S4.7	Upon arrival of the livestock at the port of embarkation: <ul style="list-style-type: none"><li>(a) responsibility for the livestock must be transferred to a competent person nominated by the exporter; and</li><li>(b) that person must be notified of any aspect of transport to the port of embarkation that might affect the future health and welfare of the livestock.</li></ul>
S4.8	To ensure that only fit and healthy livestock are transported and are loaded on board: <ul style="list-style-type: none"><li>(a) the exporter must arrange for the livestock to be inspected for health and welfare and fitness to travel, immediately before they are loaded onto the vessel;</li><li>(b) only livestock that are healthy and fit to travel can be loaded;</li><li>(c) any livestock rejected for export must be distinctively identified, and humane and effective arrangements must be made for their removal from the port;</li><li>(d) if euthanasia is necessary, it must be carried out humanely and promptly; and</li><li>(e) dead livestock must be removed from the port, and carcasses must be disposed of in compliance with all relevant health and environmental legislation.</li></ul>
S4.9	When livestock for export are loaded on vessels with enclosed decks, the ventilation system must be run continuously from the commencement of loading.
S4.10	Livestock for export must be loaded onto the vessel by competent stock handlers in a manner that prevents injury and minimises stress.
S4.11	Livestock for export must be presented for loading, and penned on the vessel, in lines segregated by species, class, age, weight, criteria in S2.10(e)(i) to (iii), and any other relevant characteristic (and, where relevant, port of destination), in accordance with the approved loading plan.
S4.12	Stocking densities and pen-group weight-range tolerances for species of livestock must be in accordance with specifications in Appendix 4.1 and heat stress assessment

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<b>Number</b>	<b>Standard</b>
	using an agreed heat stress risk assessment unless a variation is required and approved by the relevant Australian Government agency: Humane and effective arrangements must be made for the handling and care of any livestock surplus to requirements.
S4.13	All livestock for export must be offered feed and water as soon as possible after being loaded on the vessel, but no later than 12 hours after loading.
S4.14	Supplies of feed and water: (a) Adequate water of a quality to maintain good health and suitable feed to satisfy the energy requirements of the livestock for the duration of the voyage, and statutory reserves as specified in Appendix 4.2, must be loaded. (b) The feed and water provisions must take into consideration the livestock species, class, age and expected weather conditions.
S4.15	Bedding must be provided in accordance with specifications in Appendix 4.3.
S4.16	As the livestock for export are loaded on board the vessel at the port of export, responsibility for the livestock transfers to the master of the vessel, who must be notified of any aspect of the preparation of the livestock for export that might affect their future health and welfare.

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## **Division 3    Appendixes**

### **Appendix 4.1      Preparation of a loading plan**

#### **4.1.1    Loading plan**

1. A suitably competent person must be appointed by the exporter to be responsible for the handling, husbandry and welfare of the livestock for export, and to ensure that loading facilities and livestock handling standards at the port are satisfactory during unloading from the land transport, inspection and loading onto the vessel.

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2. A communication plan involving all responsible parties must be established before the loading of livestock for export begins. This plan must cover:
    - (a) roles and responsibilities of the exporter or nominated representative/s, the accredited stock person, the accredited veterinarian (if required), the master of the vessel, nominated officers and crew members, and government and port authorities;
    - (b) arrangements for regular meetings of key people before, during and after loading; and
    - (c) reporting procedures during and on completion of the voyage.
  3. Written instructions and/or standard operating procedures for the care and handling of the livestock being exported, to maintain their health and welfare during the voyage, must be prepared before departure of the vessel from an Australian port. These must address:
    - (a) the quantity and type of feed to be provided, and frequency of feeding required, for each class of livestock during the voyage;
    - (b) if water is not supplied *ad libitum*, the quantity of water to be provided and frequency of watering required during the voyage;
    - (c) pen cleaning requirements;
    - (d) treatment of livestock during the voyage; and
    - (e) authority to destroy humanely any animal that is seriously ill or injured.
  4. Loading arrangements must be made, and must take into consideration:
    - (a) port facilities, including the available water supply rate;
    - (b) port and ship security;
    - (c) environmental management;
    - (d) labour availability and competency; and
    - (e) occupational health and safety.
  5. A loading plan for the vessel on which the livestock for export are to be transported must be prepared and be compliant with

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relevant ship safety standards and must give due consideration to:

- (a) differences in handling, holding and husbandry needs of each livestock species, number of animals, sex, class, reproductive status, weight, breed, origin, preparation and transport history;
  - (b) pen layout, available pen area for the particular consignment, ventilation, vessel characteristics, port rotation, discharge sequence and stability; and
  - (c) the segregation of livestock in accordance with criteria in S2.10(a) to (e);
  - (d) separation of cattle or buffalo from other species by a passageway, an empty pen or an effective impermeable barrier, to the satisfaction of an accredited stock person or accredited veterinarian;
  - (e) location of livestock in relation to hatchways (there must be no location of livestock over a hatchway, unless the hatchway is protected against consequent damage and the hatchway covers are secured against movement); and
  - (f) location of livestock in relation to health and welfare (there must be no penning or location of livestock on or in any part of a vessel where the livestock, livestock fittings, livestock equipment or carrying arrangements could substantially compromise livestock health and/or welfare);
  - (g) provision of clearly identified hospital pens (or stalls), constructed to the standard required for the species of livestock for which they are intended as specified in Marine Orders 43 (27), on each deck or otherwise in a manner readily accessible to livestock; and
  - (h) stocking densities and pen-group weight-range tolerances for the species in accordance with the specifications in the tables below, unless a variation is approved by the relevant Australian Government agency based on an agreed heat stress risk assessment.
6. Restraint facilities and veterinary equipment, including medicines, instruments and stores sufficient for the species and number of livestock carried, must be provided on the vessel.
- The minimum restraint equipment to be carried on ships exporting feeder and slaughter cattle and/or buffalo from

Australia to facilitate treatment and minimise the potential for livestock injury and stress is outlined in Table A4.1.8.

The minimum requirements for veterinary equipment to be carried on ships exporting feeder and slaughter cattle, and/or buffalo from Australia, based on the injuries and diseases likely to occur during a normal voyage, are shown in Table A4.1.8.

The minimum requirements for veterinary equipment to be carried on ships exporting sheep and goats from Australia, based on the injuries and diseases likely to occur during a normal voyage, are shown in Table A4.1.9.

Appropriate equipment for the humane killing of livestock of the species to be carried must be provided.

7. A contingency plan for emergencies and interruption to loading must be prepared, including procedures for contacting the exporter in the event of an animal health or welfare emergency.

#### 4.1.2 Minimum pen area per head for cattle exported by sea

**Table A4.1.1 Minimum pen area per head for cattle exported by sea — default table**

Note. See provisions at the end of this Table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
200 or less	0.770
205	0.787
210	0.804
215	0.821
220	0.838
225	0.855
230	0.872
235	0.889
240	0.906
245	0.923

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
250	0.940
255	0.957
260	0.974
265	0.991
270	1.008
275	1.025
280	1.042
285	1.059
290	1.076
295	1.093
300	1.110
305	1.127
310	1.144
315	1.161
320	1.178
325	1.195
330	1.212
335	1.229
340	1.246
345	1.263
350	1.280
355	1.297
360	1.314
365	1.331
370	1.348
375	1.365
380	1.382
385	1.399



Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
390	1.416
395	1.433
400	1.450

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)	
	Voyages of 10 days or more	Voyages of less than 10 days
405	1.467	1.459
410	1.484	1.468
415	1.501	1.487
420	1.518	1.505
425	1.535	1.519
430	1.552	1.533
435	1.567	1.547
440	1.586	1.560
445	1.603	1.574
450	1.620	1.588
455	1.637	1.602
460	1.654	1.615
465	1.671	1.629
470	1.688	1.643
475	1.705	1.657
480	1.722	1.670
485	1.739	1.684
490	1.756	1.698
495	1.773	1.712
500	1.790	1.725
505	1.807	1.739
510	1.824	1.753

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)	
	Voyages of 10 days or more	Voyages of less than 10 days
515	1.841	1.767
520	1.858	1.780
525	1.875	1.794
530	1.892	1.808
535	1.909	1.822
540	1.926	1.835
545	1.943	1.849
550	1.960	1.863
555	1.977	1.877
560	1.994	1.890
565	2.011	1.904
570	2.028	1.918
575	2.045	1.932
580	2.062	1.945
585	2.079	1.959
590	2.096	1.973
595	2.113	1.987
600	2.130	2.000

- (1) Pen-group liveweight range: the liveweight range in each pen of cattle should not exceed the pen average plus or minus 50 kg.
- (2) For cattle weighing between 200 kg and 600 kg, for weights between those shown in the table, the minimum pen area per head should be calculated by linear interpolation.
- (3) The time for a voyage is calculated from completion of loading in Australia until anticipated arrival at the first port of discharge overseas.

- (4) For cattle weighing more than 600 kg, on voyages of 10 days or more, the minimum pen area per head is 2.13 m<sup>2</sup> plus 0.017 m<sup>2</sup> for each 5 kg above 600 kg.
- (5) For cattle weighing more than 600 kg, on voyages of less than 10 days, the minimum pen area per head is 2.00 m<sup>2</sup> plus 0.014 m<sup>2</sup> for each 5 kg above 600 kg.

**4.1.3 Minimum pen area per head for cattle exported by sea from a port south of latitude 26° south, from 1 May to 31 October**

**Table A4.1.2 Minimum pen area per head for cattle exported by sea from a port south of latitude 26° south, from 1 May to 31 October**

Note. See provisions at the end of this Table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
200 or less	0.847
205	0.866
210	0.884
215	0.903
220	0.922
225	0.941
230	0.959
235	0.978
240	0.997
245	1.016
250	1.034
255	1.053
260	1.071
265	1.090
270	1.109

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
275	1.128
280	1.146
285	1.165
290	1.184
295	1.203
300	1.221
305	1.240
310	1.258
315	1.277
320	1.296
325	1.315
330	1.333
335	1.352
340	1.371
345	1.390
350	1.408
355	1.427
360	1.445
365	1.464
370	1.483
375	1.502
380	1.520
385	1.539
390	1.558
395	1.613
400	1.668
405	1.688
410	1.707

---

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
415	1.727
420	1.746
425	1.766
430	1.785
435	1.805
440	1.824
445	1.844
450	1.863
455	1.883
460	1.902
465	1.922
470	1.941
475	1.961
480	1.980
485	2.000
490	2.019
495	2.039
500	2.060

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- (1) For cattle weighing between 200 kg and 500 kg, for weights between those shown in the table, the minimum pen area per head should be calculated by linear interpolation.
- (2) For cattle weighing more than 500 kg, the minimum pen area per head is 2.06 m<sup>2</sup> plus 0.02 m<sup>2</sup> for each 5 kg above 500 kg.
- (3) For shipments that originate or load from a port south of latitude 26° south and take a route that does not cross latitude 15° south, stocking densities will be calculated from Table A4.1.3 regardless of the date of the voyage.

**4.1.4    Minimum pen area per head for cattle exported by sea from a port south of latitude 26°, from 1 November to 30 April**

**Table A4.1.3    Minimum pen area per head for cattle exported by sea from a port south of latitude 26°, from 1 November to 30 April**

Note. See provisions at the end of this Table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
200 or less	0.770
205	0.787
210	0.804
215	0.821
220	0.838
225	0.855
230	0.872
235	0.889
240	0.906
245	0.923
250	0.940
255	0.957
260	0.974
265	0.991
270	1.008
275	1.025
280	1.042
285	1.059
290	1.076
295	1.093
300	1.110

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
305	1.127
310	1.144
315	1.161
320	1.178
325	1.195
330	1.212
335	1.229
340	1.246
345	1.263
350	1.280
355	1.297
360	1.314
365	1.331
370	1.348
375	1.365
380	1.382
385	1.399
390	1.416
395	1.433
400	1.450
405	1.467
410	1.484
415	1.501
420	1.518
425	1.535
430	1.552
435	1.569
440	1.586

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
445	1.603
450	1.620
455	1.637
460	1.654
465	1.671
470	1.688
475	1.705
480	1.722
485	1.775
490	1.827
495	1.880
500	1.932
505	1.984
510	2.035
515	2.086
520	2.137
525	2.157
530	2.176
535	2.196
540	2.215
545	2.235
550	2.255

- 
- (1) For cattle weighing between 200 kg and 550 kg, for weights between those shown in the table, the minimum pen area per head should be calculated by linear interpolation.
  - (2) For cattle weighing more than 550 kg, the minimum pen area per head is 2.255 m<sup>2</sup> plus 0.02 m<sup>2</sup> for each 5 kg above 550 kg.



- (3) For shipments that originate or load from a port south of latitude 26° south and take a route that does not cross latitude 15° south, stocking densities are to be calculated from Table A4.1.3 regardless of the date of the voyage.

#### 4.1.5 Minimum pen area per head for buffalo exported by sea

**Table A4.1.4 Minimum pen area per head for buffalo exported by sea**

Note. See provisions at the end of this Table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
200	0.770
205	0.787
210	0.804
215	0.821
220	0.838
225	0.855
230	0.872
235	0.889
240	0.906
245	0.923
250	0.940
255	0.957
260	0.974
265	0.991
270	1.008
275	1.025
280	1.042
285	1.059
290	1.076

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
295	1.093
300	1.110
305	1.127
310	1.144
315	1.161
320	1.178
325	1.195
330	1.212
335	1.229
340	1.246
345	1.263
350	1.280
355	1.297
360	1.314
365	1.331
370	1.348
375	1.365
380	1.382
385	1.399
390	1.416
395	1.433
400	1.450
405	1.467
410	1.484
415	1.501
420	1.518
425	1.535
430	1.552

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
435	1.569
440	1.586
445	1.603
450	1.620
455	1.637
460	1.654
465	1.671
470	1.688
475	1.705
480	1.722
485	1.739
490	1.756
495	1.773
500	1.790
505	1.807
510	1.824
515	1.841
520	1.858
525	1.875
530	1.892
535	1.909
540	1.926
545	1.943
550	1.960
555	1.977
560	1.994
565	2.011
570	2.028

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
575	2.045
580	2.062
585	2.079
590	2.096
595	2.113
600	2.130
605	2.147
610	2.164
615	2.181
620	2.198
625	2.215
630	2.232
635	2.249
640	2.266
645	2.283
650	2.300

Buffalo stocking density is to be calculated according to the formula:

$$(0.0034 \times \text{liveweight (kg)}) + 0.09 \text{ m}^2.$$

#### 4.1.6 Minimum pen area per head for sheep and goats exported by sea

**Table A4.1.5 Minimum pen area per head for sheep and goats exported by sea**

Note. See provisions at the end of this Table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> ) Nov – Apr	Minimum pen area (m <sup>2</sup> ) May – Oct
28	0.261	0.261
29	0.263	0.263

Liveweight (kg)	Minimum pen area (m <sup>2</sup> ) Nov – Apr	Minimum pen area (m <sup>2</sup> ) May – Oct
30	0.265	0.265
31	0.268	0.268
32	0.270	0.270
33	0.273	0.273
34	0.275	0.275
35	0.278	0.278
36	0.280	0.280
37	0.283	0.283
38	0.285	0.285
39	0.288	0.288
40	0.290	0.290
41	0.293	0.293
42	0.295	0.295
43	0.298	0.298
44	0.300	0.300
45	0.303	0.303
46	0.305	0.305
47	0.308	0.308
48	0.310	0.310
49	0.313	0.313
50	0.315	0.315
51	0.320	0.322
52	0.324	0.329
53	0.329	0.337
54	0.333	0.344
55	0.338	0.351
56	0.342	0.357
57	0.347	0.363

Liveweight (kg)	Minimum pen area (m <sup>2</sup> ) Nov – Apr	Minimum pen area (m <sup>2</sup> ) May – Oct
58	0.351	0.369
59	0.356	0.375
60	0.360	0.381
61	0.367	0.389
62	0.374	0.398
63	0.380	0.406
64	0.387	0.415
65	0.394	0.423
66	0.401	0.432
67	0.408	0.441
68	0.415	0.450
69	0.422	0.459
70	0.429	0.468
75	0.465	0.515
80	0.502	0.563
90	0.575	0.658

- (1) For horned rams an additional 10% pen space must be allocated.
- (2) For goats with horns in excess of Standard S1.17, the goats are penned separately and an additional 10 % space must be allocated.
- (3) For sheep carrying more than 25 mm of wool, an additional 10% pen space must be allocated.
- (4) For weights between those shown, the minimum pen area per head should be calculated by linear interpolation.

#### 4.1.7 Minimum pen area per head for farmed red or red × wapiti deer exported by sea

**Table A4.1.6 Minimum pen area per head for farmed red or red × wapiti deer exported by sea**

Note. See provisions at the end of this Table.

Liveweight (kg)	Pen area (m <sup>2</sup> )
< 100	TBA
100	1.54
110	1.57
120	1.59
130	1.62
140	1.64
150	1.67
200	1.80
250	2.08
300	2.36

- (1) Intermediate values should be calculated by linear interpolation.
- (2) Any variation of this space allowance must be approved by an AQIS authorised officer, taking into account considerations such as breed, pregnancy status, length of voyage, ventilation and likely environmental temperatures and humidity variations.
- (3) Deer must be penned in solid-walled pens with an adequate number of ventilation holes and 250–300 mm at top and bottom.
- (4) Deer must be loaded onto the ship through raceways with solid walls, such as plywood, preferably at least 2 m high. Any variation from this requirement must be approved by an AQIS authorised officer, taking into account considerations such as breed, class and number of deer to be loaded.

#### 4.1.8 Minimum pen area per head for camels exported by sea

**Table A4.1.7 Minimum pen area per head for camels exported by sea**

Note. See provisions at the end of this Table.

Average weight (kg)	Stocking density (m <sup>2</sup> /camel)
300	1.43
400	1.91
500	2.38
600	2.86

Note. An acceptable stocking density will meet the current camel industry standard. The area is arrived using the formula: area required (m<sup>2</sup>) = 0.00477 × average weight (kg).

- (1) Where a range of different animal sizes and types are to be carried, the area must be calculated for each line rather than on the basis of average weight of the entire shipment.
- (2) When camels are loaded onto a ship, the clearance between the hump and the deck of the ship must be at least 100 mm.
- (3) Pens approved for the carriage of cattle are suitable for camels with two further considerations. First, a suitable bedding material must be supplied. Second, where there is deemed to be a risk of leg injury, the rails must be covered with mesh or plywood kickboards to a height of 1 m. The opening in the rails for feed and water troughs must be at least 450 mm but not exceeding 500 mm.
- (4) Camels of different size and sex are to be penned separately.
- (5) One hospital pen must be provided for every 300 camels loaded.



#### 4.1.9 Minimum restraint and veterinary equipment — slaughter or feeder cattle or buffalo

**Table A4.1.8 Minimum restraint and veterinary equipment — slaughter or feeder cattle or buffalo**

<b>Restraint equipment</b>	Adjustable head bale (1 per ship) should be included	
	Rope halter (1 per ship)	
	Nose grip pliers (1 pair per ship)	
<b>Drugs and equipment (per 1000 cattle and buffalo)</b>	<b>Voyages of 10 days or more</b>	<b>Voyages of less than 10 days</b>
<i>Injectable antibiotics</i>		
penicillin (short acting)	30 cattle doses	15 cattle doses
oxytetracycline (long acting) or equivalent	30 cattle doses	15 cattle doses
<i>Antibiotic(s) appropriate for the treatment of bovine respiratory disease*</i>	30 cattle doses	15 cattle doses
<i>Anti-inflammatory drugs</i>		
dexadrosson	30 cattle doses	15 cattle doses
flunixin or equivalent	30 cattle doses	15 cattle doses
Topical wound treatment	Sufficient to treat 20 minor wounds	Sufficient to treat 10 minor wounds
An effective pink eye treatment system	1 box of 20 tubes	10 tubes
<i>Sedative</i>		
Xylazine	10 cattle doses	5 cattle doses
Thermometers	3 per ship	3 per ship

Needles (18 G, 1½") or equivalent	1 box of 100	1 box of 100
Hypodermic syringes	40 × 20 mL, 10 × 5 mL	20 × 20 mL, 5 × 5 mL
Postmortem kit	2 postmortem knives plus steel and sharpening stone per ship	
Remotely triggered syringe device	1 syringe plus spare parts per ship, plus 10 spare needles per 1000 animals	
Captive-bolt gun	1 per ship, plus 40 cartridges per 1000 animals	

Additional drugs and equipment may be necessary if there are other classes of cattle or buffalo in the consignment (eg mastitis treatment and obstetrical supplies for pregnant cows, scour treatments for calves).

\*The following antibiotics can be used for the treatment of bovine respiratory disease: Florfenicol, Tilmicosin, Tulathromycin, Cefiofur, Tylosin.

#### 4.1.10 Minimum veterinary equipment – sheep and goats

**Table A4.1.9 Minimum veterinary equipment – sheep and goats**

Drugs and equipment (per 10,000 sheep and goats)	
<i>Injectable antibiotics</i>	
penicillin (short acting)	10 sheep doses
oxytetracycline (long acting)	10 sheep doses
or equivalent	
Flystrike dressing	Sufficient to treat 20 wounds
An effective pink eye treatment system (similar acting to Orbenin)	1 box of 20 tubes
Thermometers	3 per ship
Needles (18 G, 1½") or equivalent	100

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Hypodermic syringes	10 x 20 mL, 2 x 5 mL
Footrot secateurs	1 pair
Postmortem kit	2 postmortem knives plus steel and sharpening stone per ship
Captive-bolt gun	1 per ship, plus 100 cartridges per 10,000 animals

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**Note.** Drugs and equipment per 10 000 animals unless otherwise noted.

Additional drugs and equipment may be necessary if there are other classes of sheep and/or goats in the consignment (eg obstetrical supplies for pregnant animals).

## **Appendix 4.2 Shipboard ration specifications and provisioning**

### **4.2.1 General**

- (1) The shipboard ration must not contain more than 30% by weight of wheat, barley or corn, unless the livestock have been adapted to the ration over a period of at least 2 weeks before export.
- (2) All pelleted feed must be accompanied by a manufacturer's declaration that states it is manufactured in accordance with national pellet standards.
- (3) All feed from a previous voyage that is suitable for livestock consumption may remain in a feed storage tank provided that:
  - (a) each tank is completely emptied at least once in every 90 days;
  - (b) all feed that is no longer suitable for livestock consumption is emptied in its entirety before further feed is loaded; and
  - (c) records are maintained of the emptying of feed storage tanks and are made available for inspection.

#### 4.2.2 Sheep and goats

- (1) Pellets used as the shipboard ration must conform to the nutritional specifications outlined in Table A4.2.1.
- (2) At the time of departure, there must be sufficient feed and water on the ship to meet the anticipated needs of the sheep and goats during the voyage, plus an additional 25% or 3 days feed and water, whichever is less.
- (3) Feed and water allowances must be as follows:
  - (a) for young sheep and goats (up to and including 4 permanent incisor teeth), at least 3 per cent of liveweight of feed per head per day;
  - (b) for sheep and goats with more than 4 permanent incisor teeth, at least 2% of liveweight of feed per head per day; and
  - (c) for sheep and goats, at least 4 L of water per head per day, except for days when the ambient temperature is expected to exceed 35°C, when allowance must be made for at least 6 L of water per head per day.
- (4) Allowance may be made for fresh water produced on the ship while at sea.

**Table A4.2.1 Pellet specifications for sheep and goats**

Pellet composition	Specification
Moisture content	< 12%
Ash as a percentage of dry matter)	< 13%
Crude protein as a percentage of dry matter)	< 12%, > 9%
Urea as a percentage of dry matter)	< 1.2%
Acid detergent fibre (as a percentage of dry matter)	18–35%
Metabolisable energy	> 8.0 MJ/kg dry matter

### 4.2.3 Cattle and buffalo

- (1) There must be sufficient water on the ship to meet the anticipated needs of the cattle and buffalo during the voyage, plus an additional 3 days water.
- (2) There must be sufficient feed on the ship to meet the anticipated needs of the cattle and buffalo during the voyage, plus an additional 20% or 3 days feed, whichever is less.
- (3) When calculating feed and water requirements, allowance must be made:
  - (a) for at least the quantity of feed shown in Table A4.2.2;
  - (b) for at least 12% of liveweight of water per head per day:
- (4) This water allowance may be reduced to at least 10% of liveweight per head per day if water consumption on the ship for each of the previous 3 voyages averaged less than 10% of liveweight per head per day.
- (5) Allowance may be made for fresh water produced on the ship while at sea.
- (6) Fodder for cattle exported from an Australian port south of latitude 26° south must include at least 1% of the required feed as chaff and/or hay.

**Table A4.2.2 Feed specifications for cattle and buffalo**

Class of cattle and buffalo	Minimum feed allowance/head/day (% liveweight)
Cattle and buffalo weighing less than 250 kg	2.5
Breeding heifers with six or fewer permanent incisor teeth (regardless of pregnancy status)	2.5
Pregnant cows	2.5
Other classes of cattle and buffalo	2.0

#### 4.2.4 Deer

- (1) Deer must be fed no less than maintenance rations. Two per cent of liveweight per head per day as good quality hay or its equivalent will usually achieve maintenance rations.
- (2) Where concentrates are fed, the concentrates should be included at a ratio of 1:4 with the roughage.
- (3) Sufficient feed must be loaded on the ship to meet maintenance requirements for the duration of the voyage, plus:
  - (a) an extra 2 days for voyages up to and including 20 days; and
  - (b) an extra 3 days for voyages between 21 and 30 days.
- (4) Feed requirements should be calculated on the basis of daily requirements of metabolisable energy (ME) in Tables A4.2.3 and A4.2.4.

**Table A4.2.3 Seasonal nutritional requirements of mature deer**

Mature deer	Energy requirement (MJ ME/day)			
	Autumn	Winter	Spring	Summer
<b>Stags</b>				
Red	19	35	42	38
Elk x red	25	47	56	51
Elk or wapiti	34	62	71	66
<b>Hinds</b>				
Red	27	26	28	49
Elk x red	48	46	50	85
Elk or wapiti	64	61	67	120

*Metabolisable energy (ME)*, measured in mega joules (MJ) produced in fermentation of food, is the digestible energy of the food provided, less the energy lost in the production of methane and urine (16–20% total).

**Note.** This assumes that diets containing 14–16% crude protein are adequate for maintenance.

**Table A4.2.4 Seasonal nutritional requirements for maintenance and growth of red deer from weaning till slaughter**

	Liveweight (kg)							
	40	50	60	70	80	90	100	110
<i>Maintenance stag requirements (MJ ME/day)</i>								
Autumn (winter sheltered)	11.9	14.1	16.2	18.2	20.1	21.9	23.7	25.5
Winter	13.5	16.0	18.3	20.6	22.7	24.8	26.9	28.9
Spring	10.8	12.8	14.7	16.5	18.2	19.9	21.5	23.1
Summer	9.9	11.7	13.4	15.0	16.6	18.1	19.6	21.1
<i>Gain (g/day)</i>								
	50	100	150	200	250	300	350	400
Extra energy needed (MJ/day)	2.7	5.3	8.0	10.6	13.3	15.9	18.6	21.2

**Note 1.** Seasonal maintenance requirements are affected by the weather, and so may be lower when temperatures are warmer than normal and higher when temperatures are lower than normal.

**Note 2.** Add extra energy for gain to the maintenance requirement to get total requirement.

#### 4.2.5 Camelids

- (1) There must be sufficient water on the ship to meet the anticipated needs of the camelids during the voyage, plus an additional 3 days water.
- (2) There must be sufficient feed on the ship to meet the anticipated needs of the animals during the voyage, plus an additional 20% or 3 days feed, whichever is less.
- (3) When calculating feed and water requirements allowance must be made:

- (a) for at least the quantity of feed shown in Table A4.2.5; and
  - (b) for at least 12% of liveweight of water per head per day:
- (4) This water allowance may be reduced to at least 10% of liveweight per head per day if water consumption on the ship for each of the previous 3 voyages averaged less than 10% of liveweight per head per day.
- (5) Allowance may be made for fresh water produced on the ship while at sea.

**Table A4.2.5 Feed specifications for camelids**

Class of camelids	Minimum feed allowance/head/day (% liveweight)
Camelids weighing less than 250 kg	2.5
Breeding females with six or fewer permanent incisor teeth (regardless of pregnancy status)	2.5
Pregnant cows	2.5
Other classes of camelids	2.0

**Table A4.2.6 Pellet/cube specifications for camelids**

Pellet composition	Specification
Moisture content	< 12%
Ash as a percentage of dry matter)	< 13%
Crude protein as a percentage of dry matter)	< 12% > 9%
Urea as a percentage of dry matter)	< 1.2%
Acid detergent fibre as a percentage of dry matter	18–35%
Metabolisable energy	> 8.0 MJ/kg dry matter



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## **Appendix 4.3 Provision of bedding**

### **4.3.1 Cattle and buffalo**

- (1) Cattle and buffalo exported on voyages of 10 days or more must be provided with sawdust, rice hulls or similar material to be used exclusively for bedding at a rate of at least 7 t or 25 m<sup>3</sup> for every 1000 m<sup>2</sup> of cattle pen space.
- (2) This does not apply to cattle and buffalo loaded from Brisbane or a port north of latitude 26° south and exported to Southeast Asia or Japan.

### **4.3.2 Deer**

Bedding, such as straw, shavings or sawdust, must be provided on all voyages and must be spread at a rate of at least 7 t or 25 m<sup>3</sup> for every 1000 m<sup>2</sup> of deer pen space before animals are loaded.

### **4.3.3 Camelids**

Bedding, such as straw, shavings or sawdust, must be provided on all voyages and must be spread at a rate of at least 7 t or 25 m<sup>3</sup> for every 1000 m<sup>2</sup> of camelid pen space before animals are loaded.

## **Appendix 4.4 Standards for the use of PLUs**

### **4.4.1 Application**

This Appendix applies where PLUs are used to transport livestock.

### **4.4.2 Stocking density**

The stocking density must be set in accordance with standard S4.3(b), with an additional 15% space allocation to account for the following as necessary:

- (a) species and class;
- (b) size and body condition;

- (c) wool or hair length;
- (d) horn status;
- (e) predicted climatic conditions;
- (f) design and capacity of the PLU.

#### **4.4.3 Consignment limit**

The maximum number of PLUs per voyage/consignment is 5 (not including 1 additional empty PLU, if identified in the CRMP as a hospital/isolation area).

#### **4.4.4 Destination and travel limit**

- (1) PLUs must not be used to transport livestock from a port of loading to a port of discharge if there is a regular service between those ports of vessels that:
  - (a) are permanently equipped for the carriage of livestock; and
  - (b) have valid ACCLs.
- (2) If PLUs are used to transport livestock, the voyage must not be more than 10 days.

#### **4.4.5 Hospital/isolation area**

- (1) Either of the following must be available, and must be clearly stated in the CRMP, as a means of segregating livestock if required:
  - (a) divider rails (any);
  - (b) an additional empty PLU, along with the required equipment or facilities to move livestock safely between PLUs.
- (2) Any “division” within a PLU must comply with the requirements of Marine Orders Part 43.
- (3) If an additional empty PLU is used as the means of segregating livestock, details of livestock (stud) that are capable of being “led” between PLUs, or of a sheep trolley or portable panels, must be included within the consignment inventory.

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#### 4.4.6 Shade and shelter

PLUs must be adequately equipped to provide shelter and shade (shade-cloth and tarpaulins). The accredited stock person or accredited veterinarian must take action before or during extreme weather conditions to minimise the risk to the welfare of livestock.

#### 4.4.7 Bedding

- (1) The floor surface of a PLU must be non-slip and non-abrasive.  
**Note.** This can be achieved through the use of sufficient and suitable bedding material for the class and species of livestock to be transported.
- (2) For cattle, bedding material (kiln-dried sawdust/shavings or equivalent) must be applied at a minimum of 4 kg per m<sup>2</sup> before loading.
- (3) Soiled bedding material must be replaced as necessary (subject to type and species).
- (4) The consistency and depth of bedding material must be continually monitored.
- (5) Bedding management must minimise abrasions, lameness, pugging, faecal coating and ammonia production.

#### 4.4.8 Placement and securing on board the vessel

- (1) The placement and securing of PLUs on board the vessel must be:
  - (a) done in accordance with sections 34 and 35 of the Marine Orders Part 43; and
  - (b) done in a way approved by a surveyor appointed under section 190 of the *Navigation Act 1912*.
- (2) PLU's must not be stacked on top of each other.
- (3) Each PLU must be stowed in a position that allows direct access to the PLU.

#### **4.4.9      Feed and water requirements**

- (1) Feed and water must be managed in accordance with standard S4.14 and the Marine Orders Part 43:
  - (a) with adequate storage space; and
  - (b) with sufficient protection from weather.
- (2) The vessel must have adequate capacity to desalinate water or sufficient water storage on board.

#### **4.4.10     Restraint and veterinary equipment**

- (1) The vessel must carry 1 rope halter and 1 nose grip pliers per consignment, as well as equipment for humane killing of livestock.
- (2) The vessel must carry veterinary equipment, including medicines, instruments and stores sufficient for the species and number of livestock carried.

**Note.** Tables A4.1.8 and A4.1.9 should be used as a guide for the types of drugs. However, only half the number of doses is required for PLUs because of the lower numbers transported.

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## **Standard 5      Onboard management of livestock**

### **Division 1      Preliminary**

#### **5.1      Guiding principle**

Onboard facilities, management and husbandry must be adequate to maintain the health and welfare of livestock throughout the sea voyage.

#### **5.2      Required outcomes**

- (1) The voyage is completed safely.
- (2) Adequate livestock services are maintained throughout the voyage.
- (3) Onboard care and management of the livestock is adequate to maintain their health and welfare throughout the voyage.
- (4) Statutory reporting requirements are met, both during and after the voyage.

#### **5.3      Overview**

- (1) Onboard management covers the period from the time the first animal is loaded onto the vessel until the last animal is unloaded at the port of disembarkation. Provisions should exist to ensure that animal health and welfare interventions are undertaken where necessary to treat or euthanase sick or injured animals.
- (2) Once loading begins at the point of embarkation, the master of the vessel assumes overall responsibility for the management and care of the livestock during transport on the vessel. This responsibility continues until the point of disembarkation. It includes the provision of satisfactory livestock services such as ventilation, food, water, drainage and lighting.

- (3) Where an accredited veterinarian is required to accompany the consignment, that person is responsible for monitoring and regular reporting of consignment conditions on board during and after the voyage.
- (4) Accredited stock persons accompanying the consignment are responsible for providing appropriate care and management of the livestock on board during the voyage.
- (5) Livestock vessels carry crew in sufficient numbers with experience in the care of animals to provide satisfactorily for their tending, feeding and watering, as well as assisting the accredited stock person(s) and/or veterinarian onboard in their responsibilities during the voyage.
- (6) After the livestock have been loaded on board the vessel and all requirements have been met, AQIS will issue the health certificate and export permit.
- (7) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a state or territory. State and territory governments are responsible for ensuring that these jurisdictional requirements are met under respective state and territory legislation. AQIS must be satisfied that importing country requirements and the Standards have been met before issuing a health certificate and export permit.

*Note.* Further details regarding roles and responsibilities and the export chain process are outlined in the *Australian Position Statement on the Export of Livestock* ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

#### **5.4 Linkages to other parts of the live export chain**

- (1) Only fit and healthy animals that comply with these Standards and importing country requirements may be presented for loading onto the vessel at the port of embarkation.
- (2) At disembarkation, the master of the vessel transfers responsibility for the animals to the importer in the importing country, and should provide details of the voyage that may affect the future health and welfare of the livestock.

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## 5.5 Definitions

In this Standard:

*a day* for reporting purposes means 24 hours commencing at 12 noon.

*accredited stock person* means a stock person who is accredited by LiveCorp for the shipboard husbandry of livestock.

*accredited veterinarian* means a veterinarian who is accredited by AQIS to carry out duties in relation to the export of livestock.

*AQIS* means the Australian Quarantine and Inspection Service.

*day 1* of the voyage means the first day at sea after leaving the first port of loading.

*long haul* means any journey greater or equal to 10 days.

*notifiable incident* means an incident that has the potential to cause serious harm to the health and welfare of animals. A notifiable incident includes, but is not limited to:

- (a) a shipboard mortality rate equal to or greater than a reportable level;
- (b) disablement of ventilation, feeding and/or watering systems on a vessel carrying livestock, causing a serious adverse effect on animal welfare;
- (c) rejection of livestock at an overseas port;
- (d) diagnosis or strong suspicion of an emergency disease in a consignment of livestock;
- (e) marine casualty of a vessel carrying livestock;
- (f) disablement of a vessel carrying livestock, such that assistance is required for return to port; and
- (g) an act of terrorism or piracy.

*reportable level*, in respect of a species, means the percentage listed below or 3 animals, whichever is the greater number of animals:

- (a) sheep and goats: 2%;
- (b) cattle and buffalo, voyages  $\geq 10$  days: 1%;
- (c) cattle and buffalo, voyages  $< 10$  days: 0.5%;
- (d) camelids: 2%;

(e) deer: 2%.

*shipboard mortality rate* refers to any species, and means the percentage determined by dividing the number of deaths of that species occurring while on the vessel (including during loading and unloading) by the total number of that species loaded, and multiplying the resulting figure by 100.

## Division 2      Standard for onboard management of livestock

### 5.6      Standard for onboard management of livestock

Number	Standard
S5.1	<p>The onboard management of livestock for export by sea must ensure that the health, welfare and physical needs of livestock are met during the voyage:</p> <ul style="list-style-type: none"><li>(a) An accredited stock person must accompany each consignment of livestock and must remain with the consignment until the vessel has completed discharging at the final port of discharge.</li><li>(b) An accredited veterinarian must accompany each consignment of livestock where required by the relevant Australian Government agency and must remain with the consignment until the vessel has completed discharging at the final port of discharge.</li><li>(c) Accredited stock persons and/or veterinarians must work with the vessel's master and crew to maintain the health and welfare of the livestock on board.</li><li>(d) All personnel handling and caring for livestock or who are otherwise responsible for animals during the voyage must be able to demonstrate an adequate level of experience and skill to allow them to undertake their duties.</li></ul>
S5.2	<p>Any livestock for export identified after loading as being sick or injured must:</p> <ul style="list-style-type: none"><li>(a) be given immediate treatment; and</li><li>(b) be killed humanely and without delay, where euthanasia is necessary.</li></ul>
S5.3	<p>The consignment must be checked before departure to ensure that the livestock have been loaded according to</p>



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<b>Number</b>	<b>Standard</b>
	the loading plan.
S5.4	All livestock for export must be offered feed and water as soon as possible after being loaded on the vessel, and within no more than 12 hours.
S5.5	All livestock on the vessel must have access to adequate water of a quality to maintain good health and suitable feed to satisfy their energy requirements, taking into consideration any particular needs of the livestock species, class and age: <ul style="list-style-type: none"><li>(a) There must be a contingency plan to provide satisfactory tending, feeding and watering of the livestock in the event of a malfunction of the automatic feeding or watering systems, but without compromising the safe navigation of the vessel.</li><li>(b) Adequate feed and water must be supplied to livestock waiting to be discharged, and during the discharge period.</li></ul>
S5.6	Livestock and livestock services on the vessel must be regularly inspected (day and night) to ensure that the health and welfare of the livestock are maintained while the livestock are on the vessel: <ul style="list-style-type: none"><li>(a) A meeting must be held daily to discuss all issues relating to the health and welfare of the livestock. This must include the master and/or the master's representative, accredited stock person and veterinarian.</li><li>(b) Livestock must be systematically inspected to assess their health and welfare.</li><li>(c) Feed and water supply systems must be monitored day and night and maintained in good order.</li><li>(d) The pen stocking density must be checked regularly throughout the voyage and adjustments made as required.</li><li>(e) Ventilation must be monitored regularly each day to ensure adequate thermoregulation of the livestock.</li><li>(f) Washing down of decks and disposal of faeces and litter must be carried out with regard to the health and welfare of livestock.</li></ul>

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Number	Standard
S5.7	<p>Any livestock identified as being sick or injured must:</p> <ul style="list-style-type: none"><li>(a) be given prompt treatment;</li><li>(b) be transferred to a hospital pen, if required; and</li><li>(c) if necessary, be euthanased humanely and without delay (the carcasses of any dead livestock must be disposed of in accordance with the requirements of Annex V of MARPOL 73/78).</li></ul> <p style="text-align: center;"><b>Note.</b> International Convention for the Prevention of Pollution from Vessels, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). Annex V: Prevention of pollution by garbage from vessels.</p>
S5.8	<p>Veterinary drugs must be stored and used according to veterinary directions and manufacturers' recommendations, and treatment records must be maintained.</p>
S5.9	<p>When bedding is used, it must be maintained in adequate condition to ensure the health and welfare of the livestock.</p>
S5.10	<p>A contingency plan for the following emergencies must be prepared for each consignment as part of the consignment risk management plan:</p> <ul style="list-style-type: none"><li>(a) mechanical breakdown;</li><li>(b) a feed or water shortage during the voyage;</li><li>(c) an outbreak of a disease during the voyage;</li><li>(d) extreme weather conditions during the voyage; and</li><li>(e) rejection of the consignment by the overseas market.</li></ul>
S5.11	<p>If a notifiable incident occurs at any time, the relevant Australian Government agency must be advised as soon as possible and within 12 hours. In relation to a notifiable incident involving a mortality equal to or greater than the reportable level, a report must be provided that includes the following:</p> <ul style="list-style-type: none"><li>(a) details of the mortalities (eg number, species, suspected cause);</li><li>(b) factors that may have contributed to the deaths; and</li><li>(c) the current location of the vessel and, if</li></ul>

Number	Standard
	appropriate, its destination and estimated time of arrival.
S5.12	For journeys greater or equal to 10 days, an accredited stock person must provide daily reports on the health and welfare of the livestock to the relevant Australian Government agency, commencing on day 1 of the voyage. The report must include the information outlined in Appendix 5.1.  Where an accredited veterinarian is on board, the veterinarian rather than the stock person must provide the daily report.
S5.13	Regardless of the journey duration, within 5 days of completion of discharge at the final port of discharge, an accredited stock person must provide an end-of-voyage report on the health and welfare of the livestock to the relevant Australian Government agency. The report must include the information outlined in Appendix 5.2.  Where an accredited veterinarian is on board, the veterinarian rather than the stock person must provide the end-of-voyage report.

### Division 3 Appendixes

#### Appendix 5.1 Daily reports to the Australian Government

Commencing on day 1 of the voyage, the report must include the following information:

Port of loading	eg Portland	eg Fremantle	
Cattle			Veterinarian .....
Buffalo			Stockman .....
Sheep			Vessel .....
Goats			Date .....
Camelids			Day No* .....
			Vessel's position and ETA at next port .....

\* must be consistent with the day number used by the Master of the Vessel

- 1 Dry bulb temperature and humidity
  - One average recording for each deck, each day
  - Bridge temperature (ambient)
- 2 Wet bulb reading – per deck
- 3 Feed consumption – average per head
- 4 Water consumption – average per head
- 5 Health and welfare issues – sick pen report including medication and treatments
- 6 Respiratory character
  - 1 = normal
  - 2 = panting
  - 3 = gasping
- 7 Faeces - average for each cattle deck
  - 1 = normal
  - 2 = sloppy
  - 3 = runny diarrhoea
  - 4 = like sheep pellets
- 8 Issues from daily meeting
- 9 Mortality

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Mortality	Euthanasia	Natural causes	Species
Daily			
Cumulative			

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- 10 General Comments

## **Appendix 5.2      End-of-voyage report to the Australian Government**

This report must provide a general overview of the voyage, with mention of any specific issues relevant to the health and welfare of the livestock, and must include the following information:

- 
- 1 Vessel name

- 
- 2 Voyage number
  - 3 Departure port(s)  
Date  
Total loaded, by species
  - 4 Discharge port(s)  
Date  
Total unloaded, by species
  - 5 Feed and water  
Access  
Maintenance issues
  - 6 Environmental conditions  
Weather  
Temperature  
Humidity  
Ventilation  
Decks/bedding
  - 7 Health and welfare of livestock  
Number of livestock born during the voyage  
Number of abortions  
Number of mortalities
  - 8 Relationships with master/crew/accredited stock  
person/accredited veterinarian
  - 9 Comments on discharge operations
-

## **Standard 6      Air transport of livestock**

### **Division 1      Preliminary**

#### **6.1      Guiding principles**

Animals are prepared according to required protocols, are fit to travel, and the journey is planned and undertaken in a manner that meets the importing country requirements for the air transport of livestock.

#### **6.2      Required outcomes**

- (1) Livestock sourced for export must meet any requirement under a law of a state or territory relating to the sourcing of livestock. State and territory governments are responsible for ensuring that these requirements are met.
- (2) Livestock sourced for export must meet these Standards and importing country requirements. AQIS is responsible for ensuring that these Standards and requirements are met.
- (3) Livestock are safely delivered to an airport of the importing country.
- (4) Statutory reporting requirements are met after the flight.
- (5) Livestock sourced for export that become sick or injured during on-farm preparation must be excluded from export, and arrangements must be made for their prompt and humane handling and care.

#### **6.3      Overview**

- (1) Air transportation of livestock for export encompasses the sourcing of livestock and their on-farm preparation, through to the air transportation phase of the export chain.
- (2) Transportation by air, whether on long international journeys or shorter domestic flights, requires careful planning to reduce

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any adverse impacts on animals. The entire export journey from the property of source to the final destination (either the airport or the receiving country's quarantine facility) should be planned.

- (3) The airlines have a responsibility to deliver animals to their destination in such a way as to minimise any adverse effects on them.
- (4) The airline and the exporter are responsible for the care and welfare of all animals during transport, even when an attendant appointed by the exporter travels with the consignment.
- (5) Animals must be transported in aircraft holds that can be adequately ventilated, and in which the temperature can be maintained at a level that is comfortable for the animals. Airport ground power units to operate air conditioning systems may be required for certain aircraft. Aircraft carrying livestock should be loaded and unloaded as quickly and safely as possible.
- (6) International Air Transport Association regulations were considered in the development of the Australian Standards for the Export of Livestock
- (7) These Standards are relevant to each stage of the livestock export chain and should be reflected in relevant quality assurance programs. Livestock sourced for export must meet any requirement under a law of a state or territory. State and territory governments are responsible for ensuring that these jurisdictional requirements are met under respective state and territory legislation. AQIS must be satisfied that importing country requirements and the Standards have been met before issuing a health certificate and export permit.

*Note.* Further details regarding roles and responsibilities and the export chain process are outlined in the *Australian Position Statement on the Export of Livestock* ([www.daff.gov.au/livestockexportstandards](http://www.daff.gov.au/livestockexportstandards)).

#### **6.4 Linkages to other parts of the export chain**

- (1) In the planning phase, the exporter must specify the livestock to be exported in the CRMP.

- (2) Where livestock for export by air transportation are transported by road to the registered premises and are prepared in registered premises, the Standards for those parts of the export chain apply.

## 6.5 Definitions

*approved premises* is a place approved by AQIS for the pre-export preparation of livestock by air.

*AQIS* means the Australian Quarantine and Inspection Service.

*CRMP* means a consignment risk management plan.

*notifiable incident* with regard to export of livestock by air includes, but is not limited to:

- (a) loss of aircraft;
- (b) disablement of ventilation systems on an aircraft carrying livestock causing a serious adverse effect on animal health and welfare;
- (c) rejection of livestock at an overseas airport;
- (d) a mortality rate equal to or greater than the reportable level; or
- (e) any other incident that has an adverse effect on animal health and welfare.

*reportable level* in respect of a species, means the percentage listed below or 3 animals, whichever is the greater number of animals:

- (a) sheep and goats: 2%;
- (b) cattle and buffalo, voyages  $\geq$  10 days: 1%;
- (c) cattle and buffalo, voyages  $<$  10 days: 0.5%;
- (d) camelids: 2%;
- (e) deer: 2%.

## Division 2 Standard for air transport of livestock

### 6.6 Standard for air transport of livestock

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Number	Standard
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S6.1	Livestock sourced for export must meet any relevant
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Number	Standard
	animal health and welfare requirements under state and territory legislation and relevant requirements under national Model Codes of Practice for the Welfare of Animals.
S6.2	Livestock sourced for export must be: <ul style="list-style-type: none"> <li>(a) identified to the property of source;</li> <li>(b) accompanied by a correctly completed and signed declaration as to the identification of the livestock and property of source; and</li> <li>(c) individually identified where testing is required during preparation.</li> </ul>
S6.3	Livestock sourced for export and intended for human consumption must comply with Australian food safety requirements, including standards for chemical residues or environmental contaminants.
S6.4	Livestock sourced for export must be fit to enter the export chain. Livestock sourced for export must be inspected on farm and any animal showing signs consistent with the rejection criteria below or any other condition that could cause the animal's health and welfare to decline during transport or export preparation must not be prepared for export. Such conditions include those shown below:

Category	Rejection criteria
General requirements	Fail to meet requirements of protocol/import permit, such as sex, type, breed, tag number Pregnancy status not confirmed as appropriate for journey
Systemic conditions	Emaciated or overfat Anorexia (inappetence) Uncoordinated, collapsed, weak Unwell, lethargic, dehydrated Ill-thrift
Musculoskeletal system	Lameness or abnormal gait Abnormal soft tissue or bony swellings

Number	Standard
	Gastrointestinal system Dysentery or profuse diarrhoea Bloat
	Nervous system Nervous symptoms (head tilt, circling, Incoordination) Abnormal or aggressive behaviour/intractable or violent
	External/skin Generalised papillomatosis or generalised ringworm, dermatophilosis Generalised and extensive buffalo fly lesions Generalised skin disease Visible external parasites Significant lacerations Discharging wounds or abscesses Cutaneous myiasis (flystrike) Ballanitis (pizzle rot in sheep) Blood/discharge from reproductive tract (vulva/prepuce)
	Head Blindness in one or both eyes Cancer eye Keratoconjunctivitis (pink eye) Excessive salivation Nasal discharge Severe coughing Respiratory distress — difficulty breathing Untipped sharp horns Cattle: horns longer than 12 cm, except in approved NOI and CRMP Buffalo: horns longer than the spread of the ears, except in approved NOI and CRMP Sheep: long horns greater than one curl, except in approved NOI and CRMP

Number	Standard
	Horns causing damage to head or eyes Deer: hard antlers longer than 5 cm Bleeding horn/antler stumps Broken antlers In velvet exceeding 10 cm in length Scabby mouth
	Other Mobs with unusual mortalities over the whole period of pre-export isolation Large disparities in size or age (redraft animals in this case)

S6.5 Cattle and buffalo sourced for export must have been weaned at least 14 days before sourcing for export.

S6.6 Female livestock must only be sourced for export for breeding if they have been pregnancy tested (cattle using manual palpation, other species by ultrasound foetal measurement) within 30 days of export and certified, by written declaration, by a person able to demonstrate a suitable level of experience and skill, to be not more than the following maximum number of days pregnant at the scheduled date of departure:

Livestock	Maximum days of gestation at scheduled date of departure
Cattle and buffalo (for breeding)	250
Deer (axis, fallow, sika)	170
Deer (rusa, red, reindeer)	185
Sheep (for breeding)	115
Goats (for breeding)	115
Camelids	250

**Note.** These gestations periods were provided by the World Organisation for Animal Health (OIE) and adopted in to IATA regulations for pregnant livestock transported by air.

For cattle and buffalo a declaration must be made in

Number	Standard
	<p>writing by a veterinarian who is a member of the Australian Cattle Veterinarians and an accredited tester under the National Cattle Pregnancy Diagnosis Scheme and who pregnancy tested the cattle or buffalo.</p> <p>For alpacas and llamas a declaration must be made in writing by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis and who pregnancy tested the alpacas and llamas.</p> <p>If the veterinarian:</p> <ul style="list-style-type: none"><li>(a) is accredited under the National Cattle Pregnancy Diagnosis Scheme; and</li><li>(b) determines that cattle or buffalo are too small to be manually palpated safely;</li></ul> <p>the veterinarian may base this certification for cattle or buffalo on assessment of the animals by a method other than manual palpation.</p>
S6.6A	<p>Cattle and buffalo sourced for export as slaughter and feeder animals must be pregnancy tested by a registered veterinarian and certified not to be pregnant. A declaration must be made in writing by the registered veterinarian who pregnancy tested the cattle or buffalo.</p>
S6.6B	<p>All female Damara breed sheep sourced as feeder or slaughter must be pregnancy tested within 30 days before export by ultrasound and certified not to be pregnant. The certification must be in writing, and given by a person able to demonstrate a suitable level of experience and skill.</p>
S6.7	<p>Livestock that are declared to be pregnant or that have given birth in the last 48 hours must not be tendered for transport unless accompanied by a veterinary certificate certifying that the animal is fit to travel and there is no evidence of imminent parturition.</p>
S6.8	<p>Ewes with a weight of 40 kg or more and all does (goats) must only be sourced for export as slaughter and feeder animals if they have been pregnancy tested by ultrasound within 30 days of export and certified not to be pregnant, by written declaration, by a person able to demonstrate a suitable level of experience and skill.</p> <ul style="list-style-type: none"><li>(a) all female Damara sheep breeds sourced as feeder</li></ul>

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Number	Standard
	or slaughter must be pregnancy tested within 30 days of export by ultrasound and certified in writing, by a person able to demonstrate a suitable level of experience and skill, not to be pregnant.
S6.9	Unless approved by the relevant Australian Government agency, lambs and goat kids must only be sourced for export by air transportation if: <ul style="list-style-type: none"><li data-bbox="619 607 1206 667">(a) they have been weaned at least 14 days before sourcing for export;</li><li data-bbox="619 678 1235 707">(b) lambs have a liveweight of more than 20 kg; and</li><li data-bbox="619 719 1219 748">(c) goat kids have a liveweight of more than 14 kg.</li></ul> For cria <ul style="list-style-type: none"><li data-bbox="619 797 1230 857">(d) cria at foot have a liveweight of more than 12kg and are 3 months old.</li></ul>
S6.9A	Cattle must only be sourced for export by air transportation if they have a minimum weight of 150 kg.
S6.10	Horned cattle and buffalo must only be sourced for export as slaughter and feeder animals: <ul style="list-style-type: none"><li data-bbox="619 1025 1235 1086">(a) for cattle, if the horns are 12 cm or less in length and tipped (blunt);</li><li data-bbox="619 1097 1203 1158">(b) for buffalo, if the horns are no longer than the spread of the ears and are blunt; and</li><li data-bbox="619 1169 1050 1198">(c) if de-horned, wounds are healed.</li></ul> Otherwise, horned cattle and buffalo must only be sourced for export with the approval of the relevant Australian Government agency.
S6.11	Horned sheep or rams must only be sourced for export if the horns: <ul style="list-style-type: none"><li data-bbox="619 1395 1262 1456">(a) are not turned in so as to cause damage to the head or eyes;</li><li data-bbox="619 1467 1267 1496">(b) would not endanger other animals during transport;</li><li data-bbox="619 1507 1230 1568">(c) would not restrict access to feed or water during transport; and</li><li data-bbox="619 1579 1241 1639">(d) are one full curl or less, or are tipped back to one full curl or less.</li></ul> Otherwise, horned sheep or rams must only be sourced for export with the approval of the relevant Australian

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<b>Number</b>	<b>Standard</b>
	Government agency.
S6.12	Goats must only be sourced for export if the horns: <ul style="list-style-type: none"><li>(a) are not turned in so as to cause damage to the head or eyes;</li><li>(b) would not endanger other animals during transport;</li><li>(c) would not restrict access to feed or water during transport; and</li><li>(d) are no more than 15 cm long and are blunt or are no more than 22 cm long with tips no more than 20 cm apart.</li></ul> Otherwise, horned goats must only be sourced for export with the approval of the relevant Australian Government agency.
S6.13	Goats must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days before transfer to registered or approved premises.
S6.14	Deer must only be sourced for export if they: <ul style="list-style-type: none"><li>(a) are at least 6 months old;</li><li>(b) have been weaned for at least 2 months before sourcing for export; and</li><li>(c) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days.</li></ul>
S6.15	Male deer must only be sourced for export if: <ul style="list-style-type: none"><li>(a) they are not in velvet or hard antler;</li><li>(b) they are not in the first week after velvetting;</li><li>(c) velvetting wounds have healed; and</li><li>(d) they are outside the roar and rut periods if they are over 1 year of age.</li></ul>
S6.16	Camels, including wild-caught camels, must only be sourced for export if they: <ul style="list-style-type: none"><li>(a) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days; and</li><li>(b) meet transport and shipping height requirements of the intended transport (ie camels standing in their</li></ul>

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<b>Number</b>	<b>Standard</b>
	natural position do not touch any overhead structures).
S6.18	A record of all vaccines, veterinary medicines and agricultural chemicals used to vaccinate or treat livestock sourced for export must be kept for at least 2 years after the date of export.
S6.18A	Female livestock must not be treated with a prostaglandin drug within 14 days of export, and not during the 60 day period before export unless they have been pregnancy tested immediately before prostaglandin treatment and declared to be in the first trimester of pregnancy or not detectably pregnant.
S6.19	Livestock sourced for export that become sick or injured during on-farm preparation must be excluded from export, and arrangements must be made for their prompt and humane handling and care.
S6.20	Loading density and penning arrangements for the export of livestock by air must conform to stocking densities and penning arrangements as given in Appendix 6.1 and with requirements under state/territory legislation and international requirements.
S6.21	At the point of loading of livestock for export by air, responsibility for the livestock must be transferred to the airline, which then notifies the captain of the aircraft, who has overall responsibility for the livestock and must be advised of the species, location and quantity of all livestock and of any special requirements of the livestock on board the aircraft.
S6.22	Livestock for export by air must be checked to ensure they remain fit to travel: <ul style="list-style-type: none"><li>(a) immediately before departure;</li><li>(b) where feasible:<ul style="list-style-type: none"><li>(i) within 30–60 minutes of commencement of the journey;</li><li>(ii) at least every 2–3 hours as conditions warrant; and</li></ul></li><li>(c) immediately prior to departure after any transit stops.</li></ul>

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<b>Number</b>	<b>Standard</b>
S6.23	Any livestock for export identified during transport by air as being distressed or injured must, where feasible: <ul style="list-style-type: none"><li>(a) be given immediate treatment if distressed or injured;</li><li>(b) be euthanased without delay as necessary; and</li><li>(c) arrangements must be made to remove or separate sick or dead livestock from pens carrying multiple animals in transit. If animals need to be off-loaded, arrangements must be made to ensure the health and welfare of the animals.</li></ul>
S6.24	Feed and water must be offered to all livestock for export by air while in transit if climatic conditions, species and class of livestock and total journey time warrant.
S6.25	A contingency plan for the following emergencies must be prepared for each consignment as part of the consignment risk management plan: <ul style="list-style-type: none"><li>(a) unavailability of the aircraft to be used for the air transportation;</li><li>(b) mechanical breakdown; and</li><li>(c) rejection of the consignment by the overseas market.</li></ul>
S6.26	Where the aircraft carrying livestock for export by air is on the ground (whether moving or stationary), the ventilation and temperature in the livestock hold must be adequate to maintain the health and welfare of the livestock.
S6.27	If a notifiable incident occurs at any time during the export of livestock by air, a report must be provided to the relevant Australian Government agency as soon as possible after the notifiable incident occurs.
S6.28	An end-of-journey report on the health and welfare of the livestock transported by air must be prepared and provided to the relevant Australian Government agency within 5 days of completion of discharge at final port of disembarkation and must contain the information outlined in Appendix 6.2.

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## Division 3    Appendixes

### Appendix 6.1    Stocking density for the penning of livestock during transport by air

#### 6.1.1    General

- (1) Tables A6.1.1 to A6.1.4 define the minimum area per head. Any decrease in the final stocking density will be determined by the certifying veterinary officer based on animal health and welfare considerations.
- (2) When calculating stocking rates, the following must be taken into account:
  - (a) It is essential that accurate final weights of livestock are obtained in view of the weight limitations imposed by the load capabilities of the aircraft and the space required per animal.
  - (b) When calculating the stocking density per pen, the number of livestock per pen must be rounded to the nearest whole number. 0.5 is rounded up.
  - (c) The livestock must be able to stand normally, and once lying down should be able to regain their feet unaided and without undue interference from other stock.
  - (d) In multi-tier penning there may be a loss of floor and height area in the upper tier due to the contour of the plane and the overall height limitation.
  - (e) When the animal stands in a natural position, no part of the animal's body (or horns) should touch any overhead part of the container.
  - (f) The pen area per head for horned cattle, buffalo, sheep and deer must be increased by 10%.
  - (g) The pen area for goats with horns in excess of S6.12 must be increased by 10%. The goats with horns in excess of S6.12 are to be penned separately.
  - (h) For total journey time (from start to finish) scheduled in excess of 24 hours, the pen area per head must be increased by 10%.

- (i) For sheep or fibre goats with more than 25 mm of wool or fibre, the pen area per head must be increased by 10%, but not cumulative to other requirements.
- (j) When livestock are loaded with mixed cargo in aircraft lower holds, the pen area per head must be increased by 10%.
- (k) Additional pen area requirements in paragraphs (f) to (i) are not cumulative.
- (l) Consideration must be given to ambient temperatures in relation to the ventilation capacity of the aircraft at loading and stopovers.
- (m) For cattle weighing more than 650 kg, exporters must submit a detailed management and loading plan to the relevant Australian Government agency as part of the NOI.

### 6.1.2 Minimum aircraft crate pen area for cattle and buffalo exported by air

**Table A6.1.1 Minimum aircraft crate pen area for cattle and buffalo exported by air**

Note. See provisions at the end of this table.

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
150	0.54
160	0.56
170	0.58
180	0.60
190	0.62
200	0.64
210	0.66
220	0.68
230	0.70
240	0.72
250	0.74
260	0.76

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
270	0.78
280	0.80
290	0.82
300	0.84
310	0.87
320	0.89
330	0.91
340	0.93
350	0.95
360	0.98
370	1.00
380	1.02
390	1.04
400	1.06
410	1.08
420	1.10
430	1.12
440	1.15
450	1.17
460	1.19
470	1.21
480	1.23
490	1.25
500	1.27
510	1.29
520	1.31
530	1.34
540	1.36
550	1.38

Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
560	1.40
570	1.42
580	1.44
590	1.46
600	1.48
610	1.50
620	1.53
630	1.55
640	1.57
650	1.59
660	1.61
670	1.64
680	1.66
690	1.68
700	1.70
710	1.72
720	1.74
730	1.76
740	1.78
750	1.80
760	1.82
770	1.84
780	1.86
790	1.88
800	1.90
810	1.93
820	1.95
830	1.97
840	1.99

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
850	2.01
860	2.03
870	2.05
880	2.07
890	2.09
900	2.12
910	2.14
920	2.16
930	2.18
940	2.20
950	2.22
960	2.24
970	2.26
980	2.28
990	2.31
1000	2.33

For weights between those shown in Table A6.1.1, the minimum pen area per head should be calculated by linear interpolation.

### 6.1.3 Minimum aircraft crate pen area for sheep exported by air

**Table A6.1.2 Minimum aircraft crate pen area for sheep exported by air**

Note. See provisions at the end of this table.

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
20	0.150
21	0.154
22	0.158

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
23	0.162
24	0.166
25	0.170
26	0.174
27	0.178
28	0.182
29	0.186
30	0.190
31	0.194
32	0.198
33	0.202
34	0.206
35	0.210
36	0.214
37	0.218
38	0.222
39	0.226
40	0.230
41	0.234
42	0.238
43	0.242
44	0.246
45	0.250
46	0.254
47	0.258
48	0.262
49	0.266
50	0.270
51	0.274

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
52	0.279
53	0.283
54	0.288
55	0.293
56	0.297
57	0.302
58	0.306
59	0.311
60	0.315
61	0.320
62	0.324
63	0.329
64	0.333
65	0.338
66	0.342
67	0.347
68	0.352
69	0.356
70	0.360
75	0.383
80	0.405
85	0.428
90	0.450
95	0.473
100	0.495

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- (1) For weights between those shown in Table A6.1.2, the minimum pen area per head should be calculated by linear interpolation.

- (2) For sheep with more than 25 mm of wool, the pen area per head must be increased by 10%, but this is not cumulative with other space requirements.

#### **6.1.4 Minimum aircraft crate pen area for goats exported by air**

**Table A6.1.3 Minimum aircraft crate pen area for goats exported by air**

Note. See provisions at the end of this table.

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<b>Liveweight (kg)</b>	<b>Minimum pen area (m<sup>2</sup>/head)</b>
15	0.093
16	0.098
17	0.103
18	0.107
19	0.112
20	0.117
21	0.122
22	0.127
23	0.131
24	0.136
25	0.141
26	0.146
27	0.151
28	0.155
29	0.160
30	0.165
31	0.170
32	0.175
33	0.179
34	0.184
35	0.189

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> /head)
36	0.194
37	0.199
38	0.203
39	0.208
40	0.213
41	0.218
42	0.223
43	0.227
44	0.232
45	0.237
46	0.242
47	0.247
48	0.251
49	0.256
50	0.261
51	0.266
52	0.271
53	0.275
54	0.280
55	0.285
60	0.309
65	0.333
70	0.357
75	0.381
80	0.405
85	0.429
90	0.453
95	0.477
100	0.501

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- (1) For weights between those shown in Table A6.1.3, the minimum pen area per head should be calculated by linear interpolation.
- (2) For fibre goats with more than 25 mm of fibre, the pen area per head must be increased by 10%, but this is not cumulative with other space requirements.

### **6.1.5      Minimum aircraft crate pen area for deer exported by air**

**Table A6.1.4      Minimum aircraft crate pen area for deer exported by air**

Note. See provisions at the end of this table.

<b>Liveweight (kg)</b>	<b>Minimum pen area (m<sup>2</sup>)</b>
20	0.13
22	0.14
24	0.15
26	0.16
28	0.17
30	0.18
32	0.19
34	0.20
36	0.21
38	0.22
40	0.23
42	0.25
44	0.26
46	0.27
48	0.28
50	0.29
55	0.31
60	0.34

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Liveweight (kg)	Minimum pen area (m <sup>2</sup> )
65	0.37
70	0.39
75	0.42
80	0.45
85	0.47
90	0.49
95	0.51
100	0.53
110	0.55
120	0.57
130	0.59
140	0.61
150	0.63
160	0.64
170	0.66
180	0.68
190	0.69
200	0.70
210	0.73
220	0.75
230	0.77
240	0.79
250	0.81
260	0.84
270	0.86
280	0.88
290	0.90
300	0.92
310	0.96

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<u>Liveweight (kg)</u>	<u>Minimum pen area (m<sup>2</sup>)</u>
320	0.98
330	1.00
340	1.02
350	1.05
360	1.08
370	1.10
380	1.12
390	1.14
400	1.17
410	1.19
420	1.21

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- (1) For deer, floor space must be adequate to allow deer to lie down during transport.

#### **6.1.6 Loading density — camelids**

- (1) For alpacas, the stocking density table for sheep applies.
- (2) For alpacas with more than 25 mm of fibre, the pen area per head must be increased by 10%.
- (3) International Air Transport Association regulations stipulate that trained camels must be penned individually for air transport. However, wild-caught camels are not accustomed to individual penning or segregation and are best transported by air in cattle pens. Use of cattle pens must be limited to camels under 300 kg liveweight.

#### **Appendix 6.2 End of air transport journey report to the Australian Government**

This report must provide a general overview of the air voyage, with mention of any specific issues relevant to the health and welfare of the livestock, and must include the following information:

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1	Aircraft type(s) and airline(s)
2	Flight number(s)
3	Departure port(s) Date Total loaded, by species
4	Transit stops Feed and water Access Maintenance issues
5	Flight conditions Weather Temperature (where the livestock is kept) Ventilation
6	Health and welfare of livestock Number of livestock born during the journey Number of abortions Number of mortalities
7	Discharge port(s) Date
8	Comments on discharge operations

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## Notes

1. All legislative instruments and compilations are registered on the Federal Register of Legislative Instruments kept under the *Legislative Instruments Act 2003*. See [www.frl.gov.au](http://www.frl.gov.au).