



Australian Government
Department of Agriculture

Standard 6 Air transport of livestock (Draft)

Australian Standards for the Export of
Livestock

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Cataloguing data

This publication (and any material sourced from it) should be attributed as: Department of Agriculture 2019, *Standard 6 Air transport of livestock: Australian Standards for the Export of Livestock*, Canberra, October. CC BY 4.0.

ISBN 978-1-76003-230-2

This publication is available at agriculture.gov.au/animal/welfare/export-trade/review-asel/air-voyages

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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.
- 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) Standard 6—Air transport of livestock encompasses the sourcing of livestock for export by air 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 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 Live Animals Regulations were considered in the development of Standard 6 of the Australian Standards for the Export of Livestock (ASEL).
- 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. The relevant Australian Government Agency 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.

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 Notice of Intention.
- 2) Where livestock for export by air transport are transported by road and are prepared in registered premises, the standards for those parts of the export chain apply (Standard 2 and 3 respectively).

6.5 Definitions

Air export journey covers the period from the time the first animal is loaded into a crate for transport by air, until the time the last animal is unloaded from the aircraft at the final destination airport.

Approved premises is a place approved in accordance with the Export Control (Animals) Order 2004 for the preparation, quarantine or isolation of livestock for export by air.

Competent pregnancy tester a person permitted under a relevant state or territory law to conduct pregnancy tests in livestock. Competent pregnancy testers may only diagnose pregnancy for feeder/slaughter cattle or buffalo by manual palpation and are not approved to use ultrasound diagnoses or the IDEXX pregnancy test. They cannot complete pregnancy testing of breeder or buffalo consignments for any market.

Charter aircraft is an aircraft on a non-scheduled operation dedicated to the export of livestock. It may have consignments from one or more exporters.

Emaciated or over-fat body condition livestock is in an emaciated or over-fat body condition if it is assessed by a competent person against the corresponding species scoring system within Appendix 6.3 to Appendix 6.9, as having the body scores in Table 1.

Table 1 Body condition scores

Species	Emaciated (inclusive)	Fit to export (inclusive)	Over-fat (inclusive)
Cattle	Less than 2	2 or more, less than 5	5 or more
Dairy cattle	Less than 3.5	3.5 or more, less than 5.5	5.5 or more
Buffalo	Less than 2	2 or more, less than 5	5 or more
All other livestock	Less than 2	2 or more, less than 4	4 or more

Freighter aircraft is an aircraft on either a scheduled or non-scheduled freight service carrying goods in addition to livestock.

Management plan details how the exporter will manage the risks associated with undertaking certain activities. Exporters must have management plans approved as part of their approved arrangement before they submit a notice of intention to export where the relevant management plan is required.

Mixed cargo is a shipment made up of 2 or more different types of goods. In this standard, a mixed consignment refers to a shipment that includes livestock and other good(s).

Notice of Intention (NOI) is a notice of intention to export submitted by the exporter under the Export Control (Animals) Order 2004.

Notifiable incident with regard to export of livestock by air includes:

- 3) loss of aircraft
- 4) disablement of ventilation systems on an aircraft carrying livestock causing a serious adverse effect on animal health and welfare
- 5) rejection of livestock at an overseas airport
- 6) a mortality rate equal to or greater than the reportable level
- 7) any other incident that has an adverse effect on animal health and welfare, or
- 8) the maximum water deprivation times are exceeded.

Registered premises is a premises registered for holding and assembling livestock for export in accordance with the Export Control (Animals) Order 2004.

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

- 1) sheep and goats: 1%
- 2) cattle and buffalo: 0.5%
- 3) camelids: 1%
- 4) deer: 1%.

Valid pregnancy test is a pregnancy test is that which has been completed in accordance with the species pregnancy test requirements within Appendix 6.10 of this standard. For the purposes of pregnancy testing requirements where required within 30 days of export, the day that the animal is pregnancy tested is taken to be day zero (0). For example, if a heifer is pregnancy tested on 1 July, day zero is 1 July and the day of loading must be no later than 31 July to meet the valid pregnancy test requirements of testing during the 30 day period.

Water deprivation time is the time that animals can be deprived of access to adequate water of a quality to maintain good health and welfare. Water deprivation time is the total continuous period of water deprivation, starting when all animals last had access to water. The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock (Land Transport Standards) uses the term time off water to describe this.

Division 2 Standard for air transport of livestock

6.6 Standard for air transport of livestock

S6.1 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 Livestock.

S6.1A In addition to any requirements under the Australian Animal Welfare Standards for the Land Transport of Livestock, livestock that have been returned to an approved premises or alternative property after being transported to the airport, must be rested for a minimum of 24 hours prior to being reloaded for transport back to the airport.

S6.1B Livestock exported by air must be exported in accordance with the International Air Transport Association Live Animals Regulations (IATA Regulations).

Note: where there is a variance between the IATA Regulations and ASEL, in which case ASEL should apply.

S6.2 Livestock sourced for export must be:

- a) identified to the property of origin in accordance with the National Livestock Identification System (NLIS), where it is applicable
- b) accompanied by a correctly completed and signed declaration as to the identification of the livestock and property of origin
- c) individually identified where any testing (including spay or pregnancy testing) is required during preparation, and
- d) if they are cattle or buffalo, individually identified by ear tag, NLIS number and property identification code (PIC) on both the submission to laboratory results, and linked with the laboratory results, where any testing is required during export preparation.

S6.3 Livestock intended for export 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 (Table 2).

Table 2 Rejection criteria

Category	Rejection criteria
General requirements	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Emaciated or over-fat. See Definitions and Appendix 6.3 to Appendix 6.9 • Anorexia (inappetence) • Uncoordinated, collapsed, weak • Unwell, lethargic, dehydrated • Ill-thrift
Musculoskeletal system	<ul style="list-style-type: none"> • Lameness of abnormal gait • Abnormal soft tissue or bony swellings
Gastrointestinal system	<ul style="list-style-type: none"> • Dysentery or profuse diarrhoea • Bloat
Nervous system	<ul style="list-style-type: none"> • Nervous symptoms (head tilt, circling, incoordination) • Abnormal or aggressive behaviour/intractable or violent
External/skin	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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: untipped horns, except in approved NOI and management plan • Buffalo: horns longer than the spread of the ears, except in approved NOI and management plan • Sheep: horns greater than one curl, except in approved NOI and management plan • Horns causing damage to head or eyes • Deer: hard antlers, unless removed leaving only buttons • Broken velvet • Are in the first 2 weeks after velveting • Are inside the roar and rut periods if they are over 1 year of age • In velvet exceeding 10cm in length • Scabby mouth
Other	<ul style="list-style-type: none"> • 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 not be sourced for export unless a valid pregnancy test has been carried out in accordance with the pregnancy testing requirements in Appendix 6.10.
- S6.6C Livestock that are exported in the last third of pregnancy must be managed throughout the air export journey in accordance with a management plan approved by the relevant government agency.
- S6.7 Livestock that are declared to be pregnant 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.
- S6.7A Livestock sourced for export with young at foot must be managed throughout the air export journey in accordance with a management plan approved by the relevant government agency.
- S6.7B Livestock that have given birth within 5 days of the intended date of export must not be exported.
- S6.8 Ewes with a weight of 40kg or more, all female fat-tailed sheep and all does (goats) must only be sourced for export as slaughter and feeder animals if they have been pregnancy tested in accordance with the pregnancy testing requirements in Appendix 6.10.
- S6.9 Unless approved by the relevant Australian Government agency, lambs and goat kids must only be sourced for export by air transportation if:
- a) they have been weaned at least 14 days before sourcing for export
 - b) lambs have a liveweight of more than 20kg; and
 - c) goat kids have a liveweight of more than 14kg.
- For cria
- d) cria at foot have a liveweight of more than 20kg and are 3 months old.
- S6.9A Cattle must only be sourced for export by air transportation if they have a minimum weight of 150kg.
- S6.9B Miniature breeds of livestock, and other livestock sourced for export that do not meet minimum liveweight requirements, must be sourced and managed throughout the air export journey in accordance with an approved management plan.
- S6.10 Horned cattle and buffalo must only be sourced for export as slaughter and feeder animals:
- a) for cattle, if the horns are tipped only removing a solid, nonvascular portion of the horn, and resulting in a blunt horn end
 - b) for buffalo, if the horns are no longer than the spread of the ears; and
 - c) wounds are healed.

Otherwise, horned cattle and buffalo must only be sourced for export with the approval of the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan.

S6.11 Horned sheep or rams must only be sourced for export if the horns:

- a) are not turned in so as to cause damage to the head or eyes
- b) would not endanger other animals during transport
- c) would not restrict access to feed or water during transport, and
- d) are no longer than one full curl.

Otherwise, horned sheep or rams must only be sourced for export with the approval of the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan.

S6.12 Goats must only be sourced for export if the horns:

- a) are not turned in so as to cause damage to the head or eyes
- b) would not endanger other animals during transport
- c) would not restrict access to feed or water during transport, and
- d) where tipping is applied; for bucks, horns should be tipped within 2.5–5cm from the tip (no further down than 2cm diameter of horn) and for does, less than 2cm from tip. Tipping should be done at least 7 days prior to transport or export.

Otherwise, horned goats must only be sourced for export with the approval of the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan.

S6.13 Non-farmed 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 at some time before being sourced for export.

S6.13B Non-farmed buffalo 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.

S6.14 Deer must only be sourced for export if they:

- a) are at least 6 months old unless agreed by the relevant Australian Government Agency
- b) have been weaned for at least 2 months before sourcing for export, and
- c) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

Note: Australian Government approval is via a management plan.

S6.15 Male deer must only be sourced for export if:

- a) they are not in velvet or must have hard antlers removed leaving only buttons
 - b) they are not in the first 2 weeks after velveting
 - c) they are outside the roar and rut periods if they are over 1 year of age.
- S6.16 Camels, including wild-caught camels, must only be sourced for export if they:
- a) have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days, and
 - b) meet transport and shipping height requirements of the intended transport (that is, camels standing in their 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 third 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. Arrangements must be made for their prompt and humane handling, treatment, euthanasia and disposal in accordance with relevant state or territory legislation.
- 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:
- a) immediately before departure
 - b) where feasible:
 - i) within 30 to 60 minutes of commencement of the flight
 - ii) at least every 2 to 3 hours during the flight
 - c) as soon as possible after landing.
 - d) immediately prior to departure during any transit stops.
- S6.22A A competent attendant appointed by the exporter(s) must accompany consignments to oversee the welfare of the livestock during flight, at transit stops and during unloading of the aircraft, where the livestock are transported:
- a) on all charter aircraft dedicated to livestock, and

- b) on a freighter aircraft unless otherwise agreed by the relevant Australian Government agency.
- S6.23 Any livestock for export identified during transport by air as being distressed or injured must, where feasible:
- a) be given immediate treatment if distressed or injured
 - b) be euthanased without delay as necessary, and
 - 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.
- 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. A competent, exporter appointed attendant must be present during planned transit stops and during unloading of livestock from the aircraft to oversee the welfare of the livestock.
- S6.24A Livestock must not be deprived of water beyond the limits specified for each species and class of animal in Appendix 6.11. Water deprivation must be managed throughout the entire journey in accordance with an approved management plan.
- S6.25 A contingency plan for the following emergencies must be prepared for each consignment:
- a) unavailability of the aircraft to be used for the air transportation
 - b) mechanical breakdown
 - c) rejection of the consignment by the overseas market
 - d) euthanasia on-board the aircraft or after unloading for any animal where it is deemed as required, if livestock are accessible and it is safe to do so, or as soon as possible after unloading from the aircraft, and
 - e) diversion to an unintended transit stop or destination market(s).
- 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.

Division 3 Appendixes

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

6.1.1 General

- 1) Table 3 to Table 7 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 may be rounded to the nearest whole number. n.7 (and below) must be rounded down.
 - 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 25mm 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 650kg, exporters must submit a detailed management and loading plan to the relevant Australian Government agency as part of the NOI.
 - n) Livestock must be penned for air transport with animals of the same species, class, gender and of a similar weight (note: castrated males may be penned with females however entire males must be penned separately). Livestock must be crated with

similar weighted and sized animals or the crate must be divided so that animals of unequal size are penned separately.

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

Table 3 Minimum aircraft crate pen area for cattle and buffalo exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
150	0.54	510	1.29
160	0.56	520	1.31
170	0.58	530	1.34
180	0.60	540	1.36
190	0.62	550	1.38
200	0.64	560	1.40
210	0.66	570	1.42
220	0.68	580	1.44
230	0.70	590	1.46
240	0.72	600	1.48
250	0.74	610	1.50
260	0.76	620	1.53
270	0.78	630	1.55
280	0.80	640	1.57
290	0.82	650	1.59
300	0.84	660	1.61
310	0.87	670	1.64
320	0.89	680	1.66
330	0.91	690	1.68
340	0.93	700	1.70
350	0.95	710	1.72
360	0.98	720	1.74
370	1.00	730	1.76
380	1.02	740	1.78
390	1.04	750	1.80
400	1.06	760	1.82
410	1.08	770	1.84
420	1.10	780	1.86
430	1.12	790	1.88
440	1.15	800	1.90
450	1.17	810	1.93
460	1.19	820	1.95
470	1.21	830	1.97
480	1.23	840	1.99
490	1.25	850	2.01
500	1.27	860	2.03

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

- 1) For weights between those shown in Table 3, the minimum pen area per head should be calculated by linear interpolation.

Minimum aircraft crate pen area for sheep exported by air

Table 4 Minimum aircraft crate pen area for sheep exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
20	0.150	45	0.250
21	0.154	46	0.254
22	0.158	47	0.258
23	0.162	48	0.262
24	0.166	49	0.266
25	0.170	50	0.270
26	0.174	51	0.274
27	0.178	52	0.279
28	0.182	53	0.283
29	0.186	54	0.288
30	0.190	55	0.293
31	0.194	56	0.297
32	0.198	57	0.302
33	0.202	58	0.306
34	0.206	59	0.311
35	0.210	60	0.315
36	0.214	61	0.320
37	0.218	62	0.324
38	0.222	63	0.329
39	0.226	64	0.333
40	0.230	65	0.338
41	0.234	66	0.342
42	0.238	67	0.347
43	0.242	68	0.352
44	0.246	69	0.356

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
70	0.360	90	0.450
75	0.383	95	0.473
80	0.405	100	0.495
85	0.428		

- 1) For weights between those shown in Table 4, the minimum pen area per head should be calculated by linear interpolation.
- 2) For sheep with more than 25mm of wool, the pen area per head must be increased by 10% but this is not cumulative with other space requirements.

Minimum aircraft crate pen area for goats exported by air

Table 5 Minimum aircraft crate pen area for goats exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
15	0.093	40	0.213
16	0.098	41	0.218
17	0.103	42	0.223
18	0.107	43	0.227
19	0.112	44	0.232
20	0.117	45	0.237
21	0.122	46	0.242
22	0.127	47	0.247
23	0.131	48	0.251
24	0.136	49	0.256
25	0.141	50	0.261
26	0.146	51	0.266
27	0.151	52	0.271
28	0.155	53	0.275
29	0.160	54	0.280
30	0.165	55	0.285
31	0.170	60	0.309
32	0.175	65	0.333
33	0.179	70	0.357
34	0.184	75	0.381
35	0.189	80	0.405
36	0.194	85	0.429
37	0.199	90	0.453
38	0.203	95	0.477
39	0.208	100	0.501

- 1) For weights between those shown in Table 5, the minimum pen area per head should be calculated by linear interpolation.
- 2) For fibre goats with more than 25mm of fibre, the pen area per head must be increased by 10% but this is not cumulative with other space requirements.

Minimum aircraft crate pen area for deer exported by air

Table 6 Minimum aircraft crate pen area for deer exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
20	0.13	140	0.61
22	0.14	150	0.63
24	0.15	160	0.64
26	0.16	170	0.66
28	0.17	180	0.68
30	0.18	190	0.69
32	0.19	200	0.70
34	0.20	210	0.73
36	0.21	220	0.75
38	0.22	230	0.77
40	0.23	240	0.79
42	0.25	250	0.81
44	0.26	260	0.84
46	0.27	270	0.86
48	0.28	280	0.88
50	0.29	290	0.90
55	0.31	300	0.92
60	0.34	310	0.96
65	0.37	320	0.98
70	0.39	330	1.00
75	0.42	340	1.02
80	0.45	350	1.05
85	0.47	360	1.08
90	0.49	370	1.10
95	0.51	380	1.12
100	0.53	390	1.14
110	0.55	400	1.17
120	0.57	410	1.19
130	0.59	420	1.21

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

Loading density—camelids**Table 7 Minimum aircraft crate pen area for alpacas exported by air**

Liveweight (kg)	Minimum pen area (m ² /head)
20	0.4
30	0.5
40	0.6
50	0.7
60	0.8
80	1.0

- 1) For alpacas with more than 25mm of fibre, the pen area per head must be increased by 10%.
- 2) Alpacas must have enough space to be able to cush during transport, that is sit with their legs folded underneath them. The estimated area for an alpaca to cush is approximately 0.55m² for a 40kg to 50kg alpaca.

For camels:

- 1) 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 300kg liveweight.
- 2) Camels over 300kg liveweight must be penned for air transport in accordance with an approved management plan.

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:

- 1) Approved premises/property
- 2) Departure airport(s); Total loaded, by species
- 3) Aircraft type(s) and airline(s)
- 4) Location of livestock on aircraft (main hold/belly hold); Charter, freighter or passenger aircraft; Attendant on board
- 5) Flight number(s); Date and departure (of flight)

Table 8 Water deprivation time

Details	Details and local time (hh:mm)	Cumulative time off water (hours)
Curfew time—animals are removed from access to water (at premises or property)	For example, curfew began at (hh:mm)	0
Loading time—time that the loading of crates began	For example, loading began at (hh:mm)	For example 4
Total flight time—including any stopovers or transits	For example, flight departed at (hh:mm) flight arrive at (hh:mm)	For example 15
Time when animals are released from the crate (time when the last animal is out)	For example animals were unloaded from crates at (hh:mm) (local time)	For example 19
Time when animals are first offered water	For example animals were offered water at the destination property at (hh:mm)	For example 22
Total water deprivation time	-	For example 22

- 6) Conditions at transit stops
 - a) Feed and water
 - b) Access to animals
 - c) Maintenance issues
 - d) Weather conditions
 - e) Ventilation
- 7) Details of flight conditions
 - a) Weather conditions
 - b) Temperature (where the livestock are kept)
 - c) Ventilation (including comments on ammonia where applicable)
- 8) Health and welfare of livestock
 - a) Number of livestock born during the journey
 - b) Number of abortions

- c) Number of mortalities and details of mortality/cause of death
 - d) Number of animals (by species) affected by injury or ill health, including cause and any treatment.
 - e) General behaviour of animals in flight (e.g. standing or resting)
 - f) General demeanour of animals (alert, active, lethargic, anxious, dull or other)
 - g) Effect on animals of any turbulence or alteration to ventilation inside aircraft
- 9) Details of discharge
- a) Airport(s)
 - b) Date and arrival time (of flight)
 - c) Comments on discharge operations at airport and/or farm.

Notes

All legislative instruments and compilations are registered on the [Federal Register of Legislative Instruments](#) kept under the *Legislative Instruments Act 2003*.

Appendix 6.3 Cattle body condition scoring

Table 9 Cattle body condition scoring

Score	Traditional muscle score equivalent	Traditional fat score equivalent	Description
0	E	0	Severely emaciated.
1	D	0	The individual bones are sharp to the touch, with no fat at the head of the tail. Hip bones and ribs are prominent.
2	B-E	1	The individual bones can be felt easily, but feel rounded rather than sharp. There is some tissue cover around the tail head. Individual ribs are no longer visually obvious.
3	A-E	2	The short ribs can be felt only with firm thumb pressure. Areas either side of the tail head have fat cover which can be felt easily.
4	A-E	3	The ribs cannot be felt and fat cover around the tail head is easily seen as slight mounds, soft to touch. Folds of fat are beginning to develop over the ribs and thighs.
5	A-E	4-6	The bone structure of the animal is no longer noticeable and the tail head is almost completely buried in fatty tissue.

Figure 1 How to apply beef cattle body condition scores

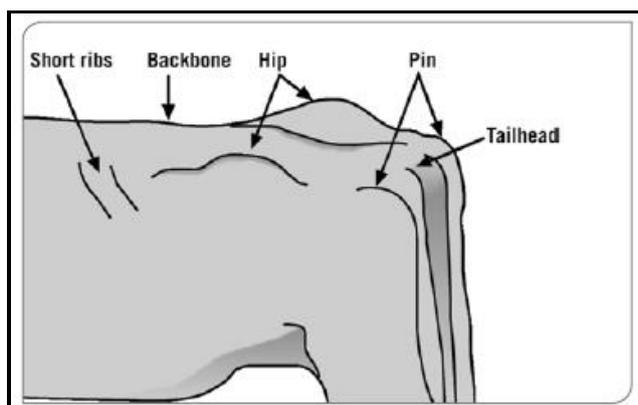
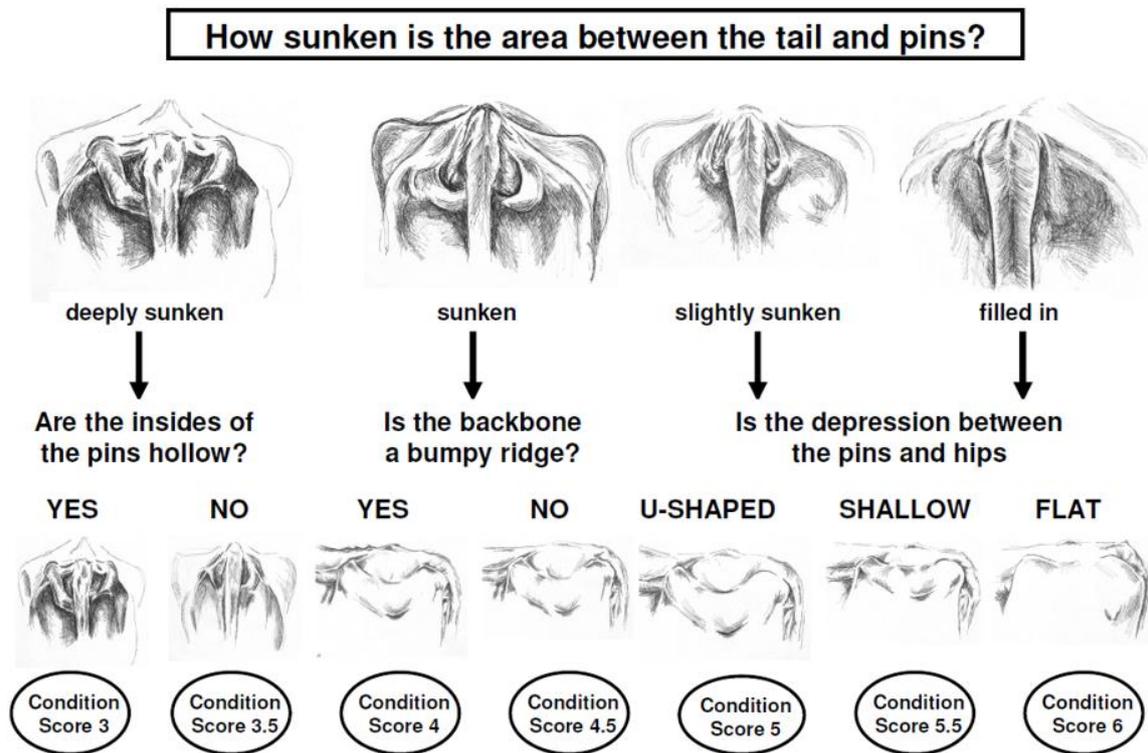


Figure 2 How to apply dairy cattle body condition scores



Appendix 6.4 Buffalo body condition scoring

Table 10 Buffalo body condition scoring

Score (1-5) export (suggested)	Optional score [1-9] (production, research)	Description	P8 fat mm thickness (1-5), [1-9]	Loin surface	Illustration of vertical section of the loin between spinous and transverse processes
1	1	Emaciated; very weak-extreme muscle wastage. All bones highly visible. Skin 'draped' over skeleton. Unsteady gait.		0 Severely concave	
	2	Very lean; becoming quite angular, concave around most muscle groups including legs with muscle depletion evident.		0 Very concave	
2	3	Lean; short ribs visible, hook and pin bones still prominent. Can easily count all ribs. Some muscle depletion. No subcutaneous fat visible or palpable.		0 Moderately concave	
	4	Backward store; tail head still prominent with hollows to pins. Ribs visible only at top and rear.	[1-2]	Slightly concave	
3	5	Store; (average) good muscle definition, with fat starting to be deposited, rib outlines disappearing, hook and pin bones still defined.	(1-4), [3-4]	Level, even slope	
	6	Forward store; hook and pin bones becoming more rounded. Pin to stifle leg straight to slightly convex.	[5-7]	Slightly convex	
4	7	Prime; quite even and smooth over whole backline. Muscling becoming more convex due to fat deposition.	(5-35), [8-14]	Moderately convex	
	8	Fat; well-rounded all over all bone. Some unevenness of fat deposits appearing around rump area.	[15-35]	Very convex	

Score (1-5) export (suggested)	Optional score [1-9] (production, research)	Description	P8 fat mm thickness (1-5), [1-9]	Loin surface	Illustration of vertical section of the loin between spinous and transverse processes
5	9	Overfat; usually only mature cows can achieve this condition. Bulbous fat deposits both sides of tail head. Pin and hook bones not discernible.	(>36), [>36]	Severely convex crease, dip along spine	

Appendix 6.5 Sheep body condition scoring

Table 11 Sheep body condition scoring

Score	Backbone	Short ribs	Illustration
1	The bones form a sharp narrow ridge. Each vertebra can be easily felt as a bone under the skin. There is only a very small eye muscle. The sheep is quite thin (virtually unsaleable).	The ends of the short ribs are very obvious. It is easy to feel the squarish shape of the ends. Using fingers spread 1cm apart, it feels like the fingernail under the skin with practically no covering.	<p>Condition Score 1</p> 
2	The bones form a narrow ridge but the points are rounded with muscle. It is easy to press between each bone. There is a reasonable eye muscle. Store condition ideal for wethers and lean meat.	The ends of the short ribs are rounded but it is easy to press between them. Using fingers spread 0.5cm apart, the ends feel rounded like finger ends. They are covered with flesh but it is easy to press under and between them.	<p>Condition Score 2</p> 
3	The vertebrae are only slightly elevated above a full eye muscle. It is possible to feel each rounded bone but not to press between them. Forward store condition ideal for most lamb markets now. No excess fat.	The ends of the short ribs are well rounded and filled in with muscle. Using 4 fingers pressed tightly together, it is possible to feel the rounded ends but not between them. They are well covered and filled in with muscle.	<p>Condition Score 3</p> 
4	It is possible to feel most vertebrae with pressure. The back bone is a smooth slightly raised ridge above full eye muscles and the skin floats over it.	It is only possible to feel or sense 1 or 2 short ribs and only possible to press under them with difficulty. It feels like the side of the palm, where maybe one end can just be sensed.	<p>Condition Score 4</p> 
5	The spine may only be felt (if at all) by pressing down firmly between the fat covered eye muscles. A bustle of fat may appear over the tail (wasteful and uneconomic).	It is virtually impossible to feel under the ends as the triangle formed by the long ribs and hip bone is filled with meat and fat. The short rib ends cannot be felt.	<p>Condition Score 5</p> 

Appendix 6.6 Goat body condition scoring

To determine the condition score, feel the grid reference (GR) site of the goat. This point is located 110mm from the backline along the second-last long rib. The condition score relates to the tissue depth (in mm) at the GR site. Figure 3 provides guidance on what to feel for when condition scoring. As Table 12 indicates, the live condition scores assigned in Australia are from one to five (Table 12). Refer to Figure 3 to locate the positions on the goat indicated by A, B, C and D in the first row of Table 12.

Figure 3 How to apply goat body condition scores

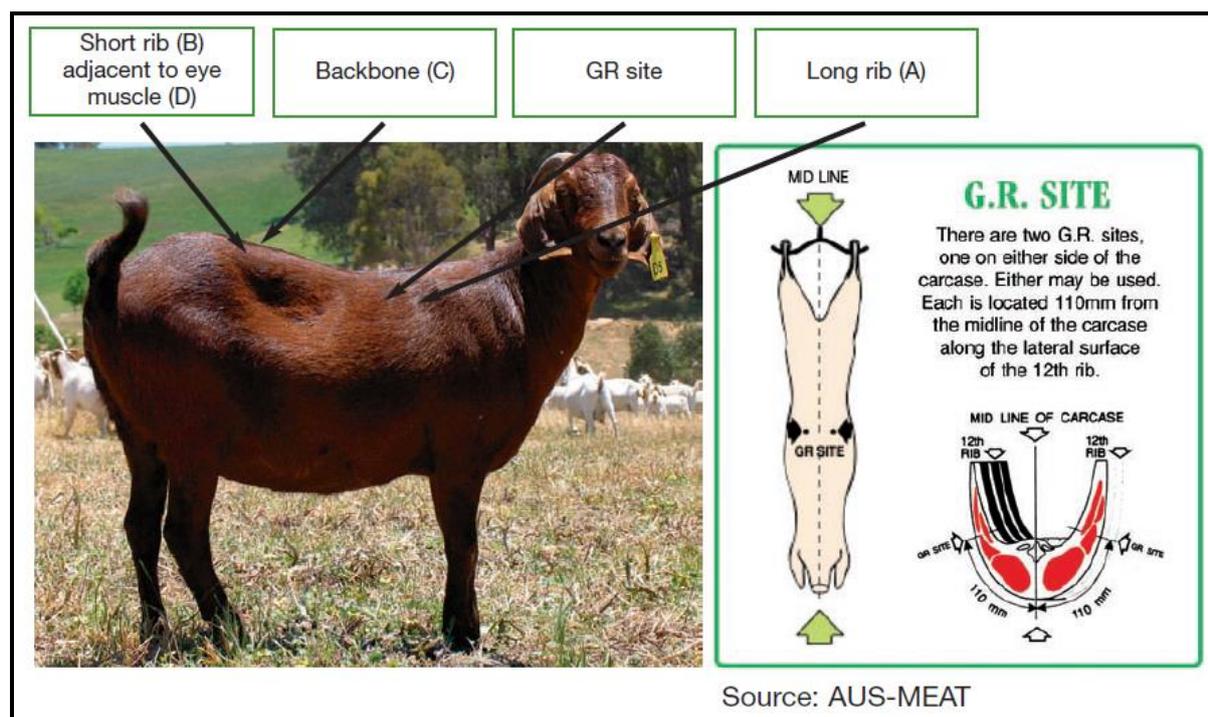


Table 12 Goat body condition scoring

Body score	GR site tissue depth (mm)	Long ribs (A)	Short ribs (B)	Backbone (C)	Eye muscle (D)
1	1–3 mm	Individual ribs can be felt very easily; cannot feel any tissues over the ribs.	Short ribs are prominent; it is easy to feel between them. The muscle mass extends two-thirds or less of the way along them.	Bones are raised and sharp; it is easy to feel between them. The muscle mass extends two-thirds or less of the way along them.	Feels noticeably dished.
2	4–6 mm	Individual ribs can be felt very easily but slight amount of tissue is present.	Ends of short ribs feel square; it is easy to feel between them. The muscle mass extends to the end of the short ribs.	Bones are slightly raised and can be easily felt, with noticeable dishing between them.	Feels straight or slightly dished.
3	7–9 mm	Individual ribs can be felt easily but some tissue is present.	End of short ribs are rounded; it is still possible to feel between them.	Bones are raised and the ends are rounded; it is still possible to feel between them.	Feels slightly rounded.

Body score	GR site tissue depth (mm)	Long ribs (A)	Short ribs (B)	Backbone (C)	Eye muscle (D)
4	10-12 mm	Individual ribs can still be felt but tissue is prominent.	Ends of short ribs are rounded; it may be possible to press between them with pressure.	Bones are slightly raised; it is possible to feel them but not between them.	Feels well rounded.
5	Over 12 mm	Individual ribs can be felt or just felt; tissue is very prominent and may be fluid.	None or only 1 or 2 bone ends nearest the rib cage may be felt. It is not possible to press between them.	Some bone ends may still be felt or backbone may be recessed in fat and difficult to feel. It is not possible to feel between bone ends.	Feels very well rounded.

Appendix 6.7 Alpaca body condition scoring

Figure 4 is an example of how to body score an alpaca by placing hand on the backbone, just forward of the pelvic area (or toward the last of the ribs (Figure 4)).

Figure 4 How to apply alpaca body condition score

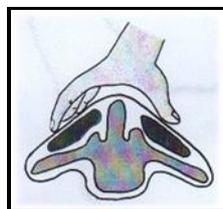
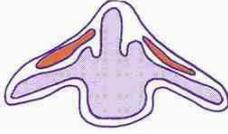
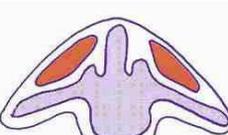
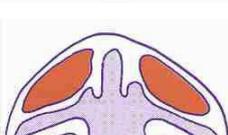
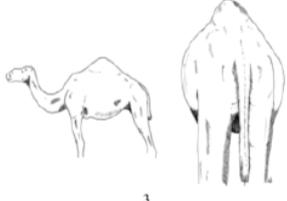
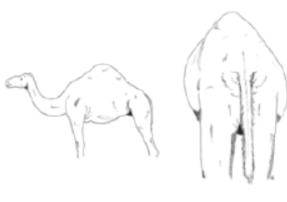


Table 13 Alpaca body condition scoring

Score	Description	Illustration
1	Severely concave between spine and ribs. The backbone is very noticeable, ribs are clearly felt and brisket shows no fat.	
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 convex between spine and ribs, the top of the back feels flat. You cannot feel backbone or ribs, brisket wobbles when touched.	

Appendix 6.8 Camel body condition scoring

Table 14 Camel body condition scoring

Score	Description	Illustration
1	<ul style="list-style-type: none"> • Little or no fat in the hump sac; hump hairy and may be leaning to one side • Ishium, tuber coxae, shoulder, spinous and transverse processes of vertebrae very prominent • Recto-genital zone very deep • Hollow of flank very visible 	 <p style="text-align: center;">Note 1</p>
2	<ul style="list-style-type: none"> • Hump with moderate development rising 5% higher than chest depth, but may also be leaning to one side • Ishium, tuber coxae, shoulder, spinous and transverse processes of vertebrae prominent • Recto-genital zone deep • Hollow of flank visible 	 <p style="text-align: center;">2</p>
3	<ul style="list-style-type: none"> • 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 • Ishium, tuber coxae, shoulder, spinous and transverse processes of vertebrae slightly prominent • Recto-genital zone shallow • Hollow of flank not visible 	 <p style="text-align: center;">3</p>
4	<ul style="list-style-type: none"> • 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 • Ishium, tuber coxae, shoulder, spinous and transverse processes of vertebrae not visible • Recto-genital zone full of fat • Hollow of flank not visible 	 <p style="text-align: center;">4</p>
5	<ul style="list-style-type: none"> • Hump overextended and rising more than 15% higher than chest, or so full that it is rounded on the sides like a semicircle • Ishium, tuber coxae, shoulder, spinous and transverse processes of vertebrae covered in fat • Recto-genital zone bulging • Ribs hollow of flank not visible 	 <p style="text-align: center;">5</p>

Appendix 6.9 Deer body condition scoring

Table 15 Deer body condition scoring

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	Over-fat—over-fat (excessive trimming required)	Pelvis concealed by fat, spine hard to palpate	Very convex

Appendix 6.10 Pregnancy testing requirements

6.10.1 Pregnancy testing for breeder cattle and buffalo

A valid pregnancy test for breeder cattle or buffalo must:

- 1) be evidenced by written certification by the person carrying out the test that the animal is no more than 250 days pregnant at the scheduled date of departure.

NOTE: For consignments where an accredited PREgCHECK® tester is required, the exporter must ensure the name of the accredited tester, their accreditation number and a statement of their accreditation is provided on the pregnancy declaration for the consignment.

- 2) The veterinarian may base this certification on assessment of the animals by a method other than manual palpation if the veterinarian:
 - a) is accredited under the PREgCHECK® Scheme, and
 - b) determines that the cattle or buffalo are too small to be manually palpated safely.

6.10.2 Pregnancy testing for feeder or slaughter cattle and buffalo

A valid pregnancy test for feeder or slaughter cattle or buffalo must:

- 1) have been carried out during the 30 day period before export, unless otherwise agreed by the relevant Australian Government agency, with that agreement to be provided only where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate it will not impact on animal welfare
- 2) be carried out by a registered veterinarian
- 3) be evidenced by written certification by the person carrying out the test that the animal is not detectably pregnant.

6.10.3 Pregnancy testing for camelids

A valid pregnancy test for camelids must:

- 1) except in the case of breeders, have been carried out during the 30 day period before export, unless otherwise agreed by the relevant Australian Government agency, with that agreement to be provided only where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate it will not impact on animal welfare
- 2) have been carried out by ultrasound, or in the case of breeders by ultrasound foetal measurement
- 3) be carried out by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis
- 4) be evidenced by written certification by the person carrying out the test that the animal is not detectably pregnant, or in the case of breeders, not more than 250 days pregnant.

6.10.4 Pregnancy testing for breeder goats, sheep and deer

A valid pregnancy test for breeder goats, sheep or deer must:

- 1) have been carried out by ultrasound, or in the case of breeders by ultrasound foetal measurement

- 2) be carried out by a person able to demonstrate a suitable level of experience and skill, and
- 3) be evidenced by written certification by the person carrying out the test that the animal is not more than the specified number of days pregnant at the scheduled date of departure in Table 16.

6.10.5 Pregnancy testing for feeder or slaughter goats and sheep

A valid pregnancy test for feeder or slaughter goats or sheep must:

- 1) have been carried out during the 30 day period before export, unless otherwise agreed by the relevant Australian Government agency, with that agreement to be provided only where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate it will not impact on animal welfare
- 2) have been carried out by ultrasound, or in the case of breeders by ultrasound foetal measurement
- 3) be carried out by a person able to demonstrate a suitable level of experience and skill, and
- 4) be evidenced by written certification by the person carrying out the test that the animal is not detectably pregnant.

Table 16 Maximum days gestation for breeder livestock

Livestock	Maximum days gestation
Cattle and buffalo	250
Deer (axis, fallow, sika)	170
Deer (rusa, red, reindeer)	185
Sheep	115
Goats	115
Camelids	250

Appendix 6.11 Maximum water deprivation times

The following maximum water deprivation times have been taken from the Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock. The maximum water deprivation time begins at the time animals are curfewed at the farm and covers the whole journey, until the point animals are provided with water again.

Table 17 Maximum water deprivation time

Species	Class	Maximum water deprivation time (hours)
Alpacas	• over 12 months	24
	• 6 to 12 months, or	8
	• up to last third of pregnancy	
	• in last third of pregnancy	4
	• lactating with young at foot, or • cria up to 6 months	
Buffalo (note: Buffalo must not be held off water prior to transport, no curfew is permissible)	• over 6 months, or	36
	• up to second third of pregnancy	
	• 1 to 6 months • in last third of pregnancy, or • lactating with young at foot	24
Camels	• over 6 months, or	48
	• up to second third of pregnancy	
	• 1 to 6 months • in second third of pregnancy, or • lactating with young at foot	24
Cattle	• over 6 months	48
	• 1 to 6 months	24
	• lactating with young at foot, or • in the last third of pregnancy	
Deer	• over 6 months	48
	• 1 to 6 months	28
	• in last third of pregnancy	24
Goats	• over 6 months	48
	• 1 to 6 months	28
	• Last third of pregnancy	24
Sheep	• over 4 months	48
	• 1 to 4 months	28
	• in the last third of pregnancy	24