Department of
Primary Industries and
Regional Development

GOVERNMENT OF
WESTERN AUSTRALIA

DPIRD Submission to the Review of the Australian Standards for the Export of Livestock 19 September 2018

Stage Two – Issues Paper

DPIRD submission to the Review of the Australian Standards for the Export of Livestock

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Review of the Australian Standards for the Export of Livestock

Stage Two – Issues Paper for Public Consultation

1. Introduction

This paper is the submission of the Department of Primary Industries and Regional Development (the Department) to the Department of Agriculture and Water Resources (DAWR) review of the Australian Standards for the Export of Livestock Review (the Review). This document comments on the Discussion Paper prepared as Stage 2 of the Review including evidence and justification for the Department's comments.

This submission focuses on issues relevant to the export of sheep and cattle, a trade that is important to Western Australia. Questions that the Department does not address are shown as 'no comment'.

The Department generally recommends a more robust approach to the enforcement of ASEL and associated regulatory requirements. The failure of some exporters to respect the current requirements is a major concern and, in our view, represents a risk to the livestock sector. The need for a more rigorous approach to the enforcement of the ASEL was reflected in the recent report of Dr McCarthy. If the regulator does not enforce the rules effectively, tightening the requirements will not achieve very much.

A key consideration is the collection of accurate information on the number and weight of animals boarding a ship for export. If this information is not correct, compliance with the ASEL stocking density cannot be ascertained. When pens are overstocked, welfare problems result. Animals cannot access to feed and water, move freely or lie down and some will be trampled and injured. The Department has observed this situation in consignments arriving in Fremantle after only 4-5 days travel from other Australian ports.

The review of ASEL is crucial to address community concerns about the welfare of exported livestock and give the livestock sector confidence about the future arrangements for live export.

2A Consultation

No questions in this section.

2B Overview of Issues Paper

No questions in this section

3. Reporting and Investigations

3.1 Reportable mortality rates

Questions about reportable mortality

1) *Should the current reportable mortality rates (RMR) be revised and, if so, how?*
2) *At what level of mortality should a notifiable incident be declared, thereby triggering an investigation?*
3) *Should there be a relationship between the average mortality rate and the RMR and should it be reviewed annually?*
4) *What should be the stated purpose of an RMR, and what should be the consequence(s) of exceeding the RMR for a voyage?*
5) *Should the RMR also relate to classes of livestock (within species), different areas of the vessel etc. as well as length of journey?*
6) *Should the RMR be replaced by, or supplemented with, reportable levels for more general welfare indicators (e.g. see McCarthy Review report)? If so, what should the welfare indicators be and what should be the reportable level for each?*

The Reportable Mortality Rate (RMR) is a measure that, when exceeded, triggers a requirement to report to DAWR. It applies to short haul voyages (e.g. China) and long haul voyages (e.g. to the Middle East, Israel, Turkey and Russia). The RMR applies across the entire journey and any investigations of mortality incidents are retrospective.

Although RMR is treated as an indicator of welfare, it is at best a very coarse measure and, in our view, of limited value. For example; a vessel carrying 100,000 livestock on an 8 day voyage to China, with mortality of 100 animals per day would lose 800 animals (0.08%). This would not trigger a requirement to report. If this shipment instead travelled for 24 days to the Middle East, losing 800 animals per day, it would lose 4,800 animals (4.8%) and the reporting requirement would be triggered. The welfare conditions on these two shipments could be similar – but only the longer shipment would be required to submit reports. This highlights the rather arbitrary way the RMR is currently applied.

Welfare problems may be associated with a particular exporter, vessel, route, class of sheep, or other parameter and investigations based solely on mortalities exceeding the RMR do not recognise this fact. For example, as shown in Figure 1 below, under the same conditions, rams are more likely to die than other sheep. More care should be taken with rams, including decisions on when and where they should be shipped.

The RMR represents the total numbers of animals lost as a percentage of those loaded and is, therefore, dependent on accurate information regarding the number loaded. As previously stated, RMR does not take into account daily mortality or

external factors affecting mortality, such as the part of the vessel in which mortalities are higher, or the particular class of animal that is more likely to die. The measurement of mortality on a daily basis would be more useful as it would provide information on trends and spikes in mortality. A "reporting trigger" value for daily mortality could also be established to replace the current RMR.

The RMR previously applied to live sheep exports was 2%. Since the publication of the McCarthy Report, the RMR for live sheep export was revised to 1%. Even 1% represents quite a large number of mortalities. By comparison, an average mortality rate of 1% during a 3-week period would not be acceptable in a land-based livestock enterprise. By way of comparison, mortality in 60,000 sheep at a registered premise in WA during a 3-week period is about 5 per day (0.018%).

Animal welfare scientists generally agree that good welfare requires more than simply avoiding mortality. As stated in the submission of the Australian Veterinary Association (2018) "animal welfare science relates to the physical and mental state of an animal and recognises the sentience of animals. Changes that are made should be based on ensuring the physical and mental welfare needs of exported animals throughout the entire journey and not solely restricted to addressing mortalities." The Department recommends the addition of more specific animal welfare indicators - a position that is supported by research funded by Meat and Livestock Australia (MLA), scientific reviews conducted by the AVA (2018) and Murdoch University (2018). Pines et al. (reports dated 2005 and 2007) provided the following advice on the development of welfare indicators:

"Shipboard measures of animal welfare have been the subject of a survey of stakeholders (Pines et al 2007). The survey identified mortality incidence, clinical disease incidence, respiration rate, space allowance, ammonia levels, weight change and wet bulb temperature as the most preferred indicators. Of these, the effect of space allowance is the research question so this is not a welfare indicator in this context, and ammonia levels and wet bulb temperature can be viewed as exposure variables rather than outcomes. The difficulties with using existing data to assess mortality incidence, clinical disease incidence and weight change are noted in Table 9 and no quantitative data were available on respiration rate for the 19 voyages studied. Animal welfare experts should be consulted to explore additional indicators of animal welfare when designing any future studies assessing effects of stocking density on animal welfare." (Extract from Pines et al. 2007)

The Department has carried out a limited number of inspections on board vessels loaded with sheep and cattle for export, which arrived in Fremantle part-loaded in other Australian ports. We have observed pens so crowded that animals were climbing on top of one another, some unable to get to their feet, and others with no room to move or lie down. In one vessel that docked in Fremantle after a 5 day voyage from another Australian port, troughs were heavily contaminated with faeces and there was insufficient water in some pens.

These findings make it clear that failure to comply with ASEL stocking densities will cause harm to animals on board export vessels, through failure to satisfy the basic

needs of food, clean water, and rest. This supports our recommendation for the introduction of animal based welfare indicators at the pen level.

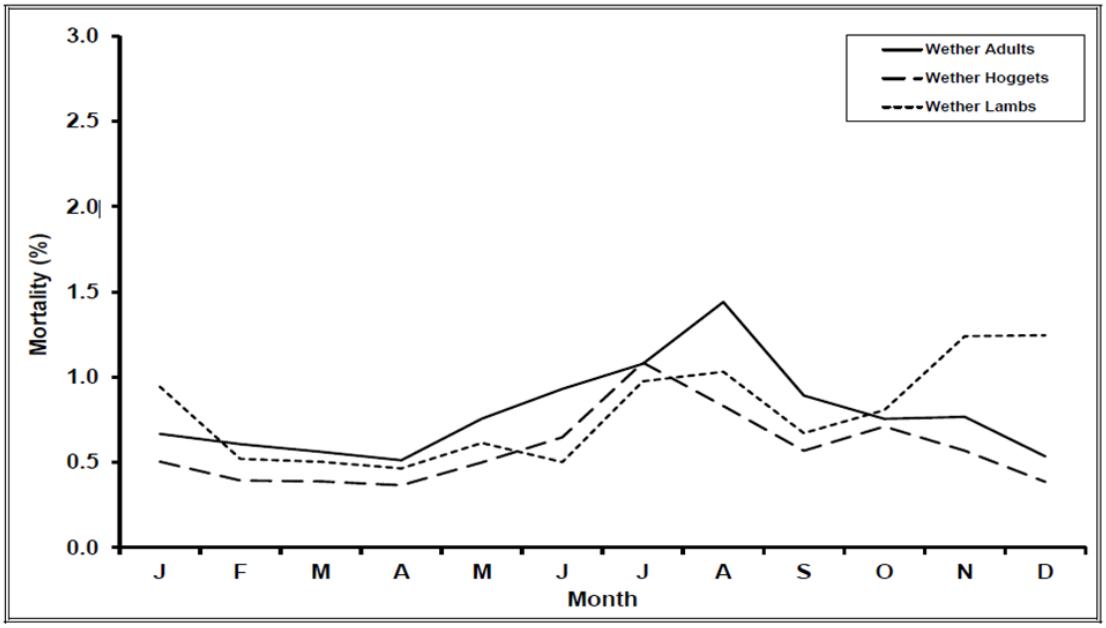
Recommendations on RMR

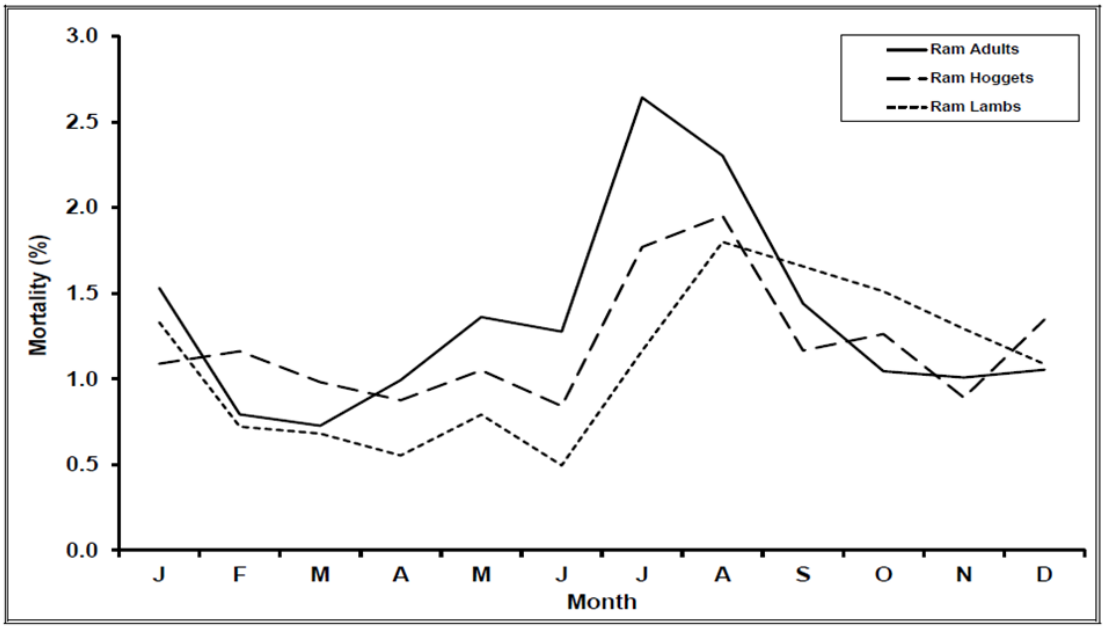
- The usefulness of the RMR should be improved by measuring and applying limits applied on a shorter unit of time (e.g. daily) as this would enable more precise information on trends and spikes in mortality;
- Levels of mortality that 'trigger' reporting should be reviewed annually and adjusted as may be required with the overall goal of achieving reduced losses / better animal welfare outcomes;
- Individual incidents where the reportable mortality rate is exceeded should generate changes in the conditions imposed by the regulator (e.g. reduced stocking rates) and in the management by the exporter of subsequent shipments;
- High mortality incidents should result in specific financial penalties;
- Serious or repeated high mortality events should result in suspension or cancellation of the exporter's licence.

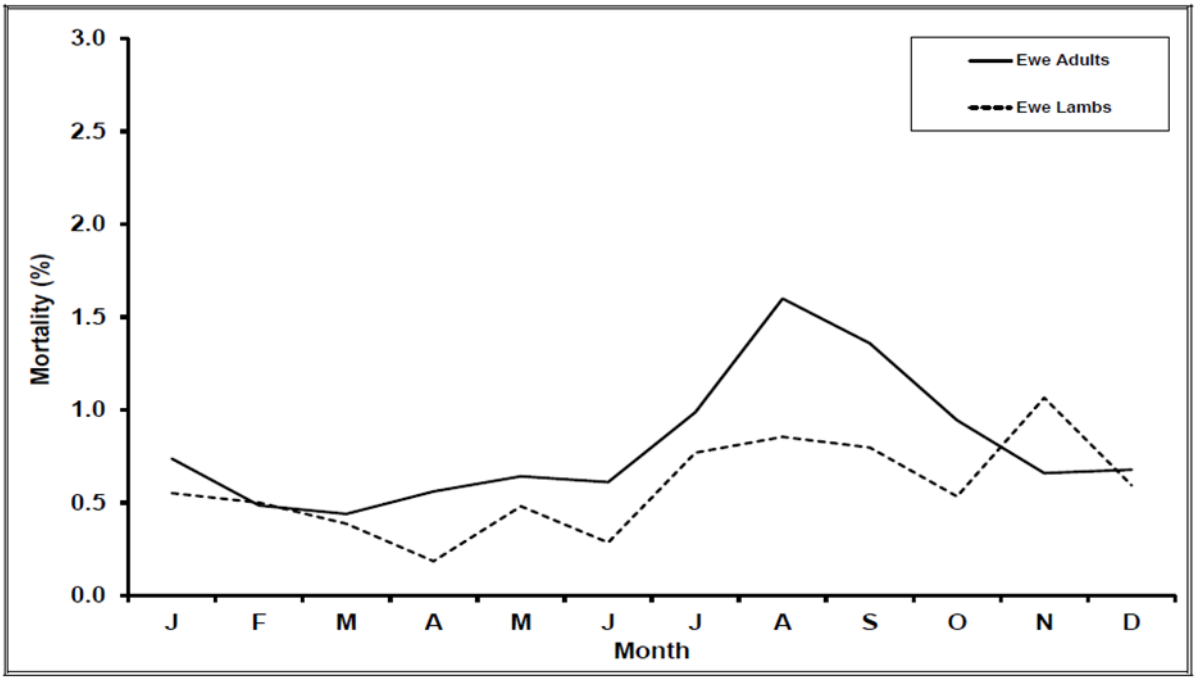
Recommendations on welfare indicators

- The Department agrees with Recommendation 19 in the McCarthy Report, that daily monitoring of welfare indicators such as panting score and heat stress score should be mandatory;
- Consideration to be given to the use of additional welfare indicators, e.g. availability of feed and water in every pen and condition of bedding (moisture, faecal contamination);
- Environmental conditions (dry bulb temperature - DBT), relative humidity (RH) and wet bulb temperature (WBT) should be measured in the hold and on the bridge at midday via real-time monitoring with computer capture (ref. McCarthy and Banhazi, 2016);
- Ammonia levels should be measured and recorded daily and action taken as needed to keep levels under control;
- Observations of animal behaviour.

Figure 1. Monthly mortality (1%) for wether and ram adults, hoggets and lambs, and ewe adults and lambs exported by sea from Australia to the Middle East/North Africa from 2007 to 2016 (an exceptional voyage in 2013 and in 2014 excluded; see 6.2 Appendix 2) (Norman, 2017).







3.2 Voyage reporting requirements

Questions about voyage reporting

1) *What further changes, if any, do you think are necessary to the voyage reporting requirements of the standards?*

2) *Should the voyage reporting changes recommended by the McCarthy Review and then instituted by the Department be applied more broadly?*

3) Some stakeholders would like voyage reports to be publicly available, while others argue that this approach may limit candour. What is the best approach to balance public transparency with frankness in reporting?

4) Should there be on board real-time monitoring of animals and vessel conditions? If so, what should these be and what would be the cost?

5) *Should there be specific recording and reporting of additional environmental parameters on vessels during voyages? What might these be, and can or should reportable 'trigger' levels be set?*

6) Should there be specific recording and reporting of animal welfare indicators during, and at the conclusion of a voyage? If so, what might these welfare indicators be, how frequently should they be measured and can/should reportable trigger levels for these measures be established?

The changes to reporting recommended by McCarthy should be applied more broadly. There is considerable public concern about live export and the Department supports greater transparency. Livestock export is a commercial business and the exporter should bear the cost of compliance with statutory requirements.

Monitoring of animals and vessel conditions

The Department recommends that there should be on board real-time monitoring of animals and conditions for all voyages, not just long-haul journeys. The following matters should be addressed on a daily basis:

- Incidence of behavioural change, disease, injuries and other indicators of welfare problems in each pen (not by deck or tier) – to enable adjustments to stocking density to be made if appropriate.
- Wash-downs and condition of decks and pens, including photographic evidence (e.g. use of an iPad at pen-side).
- Troughs – cleanliness and maintenance issues e.g. leaking valves.
- Hospital pen report - number of animals, problem (e.g. injury, disease) and use of equipment or drugs to treat animals. If an animal is treated, records should be kept of the procedures and treatments (also see section 9.3);
- Weather and effects on animals – e.g. can animals stand; measures taken to assist stability in the pens e.g. addition of more bedding; injuries and how they were sustained e.g. slippery deck due to faeces, poor maintenance of pens, insufficient bedding.

The Department supports CCTV monitoring of animals and real-time monitoring of vessel conditions i.e. WBT, DBT, RH and ammonia levels. As there is variation in environmental conditions between and within decks, the number and placement of sensors should be carefully considered (Zhang et al. 2017).

The Department notes that the Australian Maritime Safety Authority (AMSA) does not define ‘non-slip decking’. This is an important issue. Development of a standard and guidelines for use during AMSA inspections is recommended.

In support of these recommendations, the Department has noted that when there is independent scrutiny of the treatment of animals, behaviour and actions are improved. For example, when an ABC film crew was present at Fremantle during the loading of a live export vessel, the exporter’s management of loading was completely different from the usual process. One truck at a time (instead of several) was allowed on the wharf. The sheep were unloaded in a calm orderly manner and herded up to the gangway, where they walked single file onto the ship. Upon entry to the ship, personnel guided and counted sheep into pens until the correct stocking density was determined. Once unloading of this truck was completed, it left through a gate manned by a port officer, who then gave clearance for the next truck to enter and unload. This scene was completely at variance with the usual approach to loading, which results in animals and humans being highly stressed - and resultant animal welfare problems.

Once the film crew left the wharf, the operation reverted to normal.

Figure 2. ABC Visit to Fremantle Port – single truck unloading sheep onto vessel

Figure 3.Trucks unloading at Fremantle Port when ABC not filming

Figure 4. Trucks unloading at Fremantle when ABC not filming – 16 trucks on the wharf.

Monitoring of environmental parameters.

There should be additional monitoring of environmental parameters as follows:

Ammonia level
The maximum level should be 25ppm – this is feasible for industry and acceptable for animal welfare (Costa, Accioly and Cake, 2003). Instruments for measuring levels of ammonia are not costly (Hanna Instruments 2017). In case of higher levels, action could include improving ventilation; regular change of bedding, and feeding lower protein diets containing acid salts (Costa, Accioly and Cake, 2003).

Humidity
Humidity (wet bulb temperature, WBT) should be measured regularly to assess the risk of heat stress to livestock on board a vessel. In several vessels where WBT has been recorded, the highest humidity has occurred during the night, so it is recommended to measure WBT at 0600, 1200, 1800 and 2400. As stated in the Veterinary Handbook for the live export industry, WBT of 30C should trigger action to manage heat stress but stockpersons should monitor environmental conditions constantly and should take measures to mitigate risks *before* a critical level is reached. For example: ventilation should be turned up, stocking density reduced in hot spots such as the top deck in full sun and pens around the engine room and fuel tanks. Cattle (but not sheep) can be lightly sprayed with water (Jubb and Perkins, 2012).

Figure 5 shows WBT criteria for assessment of risks to cattle and sheep.

Figure 5. Wet bulb temperature risk criteria for heat stress on live export vessels.

	Wet bulb temperature risk range		
Animal Type	Safe	Caution	Danger
Bos Indicus	<28°C	28-31°C (non-acclimatised)	>31°C (non-acclimatised)
	<26°C	30-33°C (acclimatised)	>33°C (acclimatised)
Bos Taurus	<26°C	26-30°C	>30°C
Sheep	<26	26-29°C	>29°C

(Jubb and Perkins, 2012)

The Department recommends that the ASEL stocking density for vessels transporting livestock to the Middle East during the northern summer also be adjusted according to the location of pens on the vessel. Animals in pens that are on the top deck (exposed to the sun) and those closest to the engine and fuel tanks are likely to be exposed to higher temperatures. When environmental temperatures are very high, stocking densities in these pens should be reduced, taking care to ensure that the movement of animals does not cause other pens to be overstocked, resulting in heat stress in another location.

The Department supports real-time monitoring and recording of the conditions of animals on all decks and in all pens, using CCTV and computers. Animal welfare and environmental conditions should be observed in real time and remedial measures taken when issues are found.

4. Heat stress risk assessment

Questions about limits relating to heat stress risk assessment application

1) *Should paragraph 3A.4 (a) (ii) be amended to include other geographical locations?*
   3A.4 (a) (ii): For exports to the Middle East, an agreed heat stress assessment must be completed and indicate the risk is manageable as per the testing criteria in this Standard.
2) *Is the restrictive period of May to October for voyages departing to the Middle East appropriate? Are these the high risk months for heat stress for animals being exported to the Middle East? If not, what months should be considered as high risk?*
3) *Are there different high risk months for different markets that aren't considered in the standards*

Paragraph 3A.4 (a) (ii) should be amended to address the shipment of cattle and sheep across the equator. Investigations are currently under way in relation to two incidents in cattle shipped across the equator during the southern winter. Press reports indicate that 46 cattle died on board the MV Dareen en route to China (Arnel, 2018) and 33 on the MV Yangtze Fortune (Butterly, 2018).

The Department does not have specific data on sheep but we recommend an assessment of risk associated with the shipment of sheep across the equator.

The restrictive period for the Middle East (May to October) is generally appropriate.

The Department recommends the examination of data on shipments via the Black Sea in the northern winter e.g. to Russia. We are aware of reports of ice on the decks. Extreme cold could present a risk to the welfare of livestock shipped from Australia during the southern summer months.

The Unloading Sequence
The Department would also like to comment on the issue of 'first port' and the sequence of unloading, as mentioned by McCarthy (2018). This can have a major bearing on heat stress, particularly for sheep, as illustrated by high mortality events on the MV Al Shuwaikh and the MV Awassi Express.

MV Al Shuwaikh (July 2016)

DAWR investigated a shipment in which there were 1,741 deaths (2.51% mortality). The investigation established that:

1) The first port of call was Qatar – known to be highest risk
2) Heavier sheep had the highest mortality rate, of 2.15 – 23.33%)
3) Most deaths were due to heat stress
4) Boggy faecal pads / high humidity
5) Discrepancy in reported numbers –1,286 animals were not accounted for, potentially accounting for a mortality rate of 4.36% (3027 sheep).

DAWR concluded: "The cause of this reportable mortality was heat stress. A peak in cases occurred over three days (which corresponded with the most extreme conditions) and a delayed discharge in Qatar."
(Sheep exported by sea to Qatar, Kuwait, United Arab Emirates and Oman in July 2016, amended January 2018). Mortality Investigation Report 65).

MV Awassi Express (August/September 2016)

DAWR investigated a shipment in which 2,400 mortalities were recorded (3.76%). Sheep were first delivered to Qatar in August 2017, where most of the mortalities occurred while the ship waited to enter Hamad Port. There was a heat event and 90% humidity.
(Sheep exported by sea to Qatar, Kuwait and United Arab Emirates in August 2017. Mortality Investigation Report 69).

Muscat and Qatar pose the most serious risk to animals shipped to the Gulf in terms of temperature and humidity (see Figures 6 and 7). One approach to mitigating the risk is to reduce stocking density. Another strategy used by exporters, is to sail directly to Kuwait, where it is still very hot but not as humid, and partly unload the vessel. The vessel then sails back down through the other Gulf ports with less livestock, more space and lower risk of mortality due to heat stress.

Recommendation

As per McCarthy, 2018: If Kuwait is a port of destination, the vessel should sail directly to Kuwait, partially unload there, then sail to the other Gulf ports carrying less sheep.

Figure 6. Doha Climate Chart (Climatemps.com, n.d.)

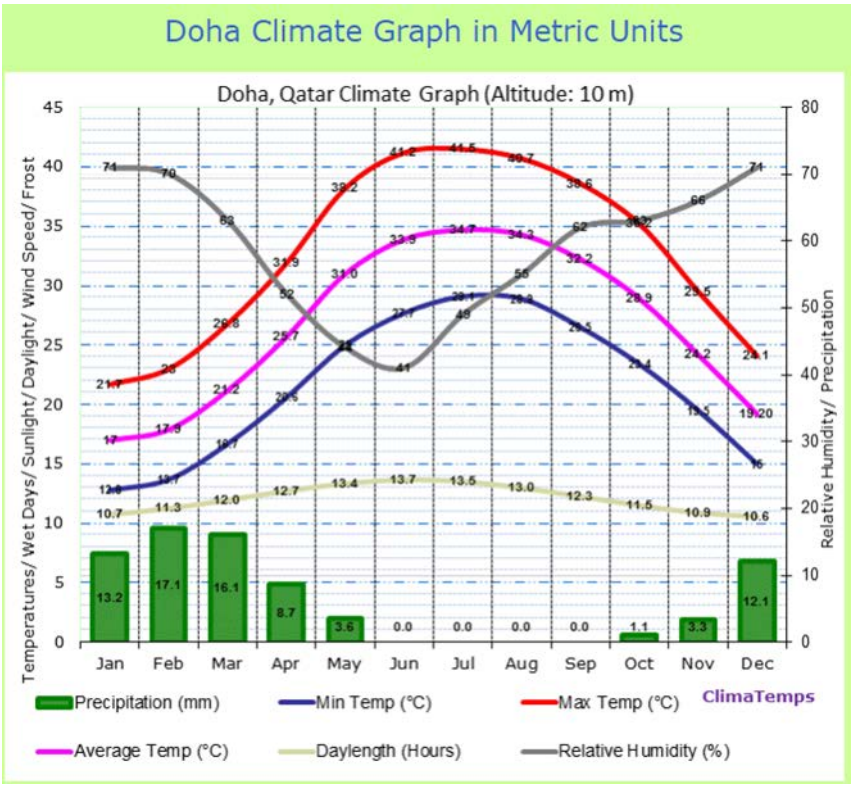


Figure 7. Map of Persian Gulf (also known as Arabian Gulf)

Google Maps, n.d.

5. Sourcing and preparation of animals

5.1 Questions about sourcing Bos Taurus cattle

1) Should Paragraph 1A 3.2 (c) (iii) be retained in its current form?

1.A.3.2 Rejection criteria – cattle

1.A3.2 (bc)(iii) – Bos Taurus cattle from an area of Australia south of latitude 26 degrees south must not be sourced for export to the Middle East from May to October unless an agreed livestock heat stress risk assessment indicates the risk is manageable as per testing criteria specified.

2) Should Paragraph 1A 3.2 (c) (iv) be retained in its current form?

Paragraph 1A 3.2 (c) (iii) should be amended.

While the export of sheep has been the focus of attention in recent reviews, breaches of the RMR may also occur in shipments of cattle. Investigations are currently under way in relation to two incidents in cattle shipped across the equator during the southern winter. Press reports indicate that 46 cattle died on board the MV Dareen en route to China (Arnel, 2018) and 33 on the MV Yangtze Fortune (Butterly, 2018).

For Bos Taurus cattle, all countries in the northern hemisphere should be included – i.e. an agreed heat stress risk assessment should be conducted.

5.2 Shearing sheep and hair sheep

Questions about shearing livestock with wool, fibre or hair.

1) Should there be a minimum period of time off-shears and/or wool length to apply for all wool sheep being sourced for export?

2) *Should all hair sheep and alpacas be subject to the same requirements as wool sheep?*

3) *Should the standards be amended to alter the specifications currently in place prescribing time-off periods for shorn wool sheep and shorn hair sheep? If so, what would you suggest?*

4) Are any other changes necessary to the requirements for wool sheep and hair sheep?

5) Should the current standards regarding timing of shearing prior to loading for export by sea be revised?

The Department notes that shorn sheep are more heat tolerant. We recommend a minimum period of 14 days post shearing before sheep are transported from the property of origin to the registered export premises.

- If live export of sheep during the northern summer continues, this should be a mandatory requirement.

The Department recommends against shearing at the registered premises, as this is an added stressor prior to shipment and can contribute to the problem of inappetence.

Sheep should be shorn at least 14 days before loading onto a vessel, to allow time for shearing wounds to heal before the sheep enter a dirty environment where wound

contamination and infection is likely to occur. Sheep with open or infected wounds should not be certified as fit to load. They should be treated and not exported.

Both wool and hair sheep are vulnerable to heat stress and should be shorn. Shearing also facilitates monitoring for weight loss, bloat, respiratory rate and, for fat tailed sheep, diarrhoea.

The Department recommends a mandatory minimum 14 days post shearing before sheep are exported during in the northern hemisphere summer.

The standards should also address the length of wool required on sheep exported during the northern winter. Cold weather soon after shearing increases the risk of death from hypothermia. Recently shorn sheep may have only 3mm of insulating wool and can experience up to a 3-fold increase in heat loss. Sheep with up to 4 - 6 weeks wool are at a higher risk of hypothermia during the extreme cold of a northern winter. (Hypothermia in sheep, DPIRD, n.d.).

5.3 Maximum weight of cattle and buffalo sourced for export by sea

Questions about maximum weight for cattle and buffalo to be exported by sea

1) Should the maximum weight for sourcing and exporting cattle and buffalo be the same?

2) Should cattle and buffalo exported for feeder and slaughter purposes have a different maximum weight to cattle and buffalo exported for breeder purposes?

3) *Is 500 kg appropriate? Is 650 kg? Should it be higher/lower and why? What are the animal health and welfare risks? Are there any mitigating measures that must be taken?*

4) Is a weight restriction appropriate and are there extra conditions that should apply or should it be more specific, for instance, a body condition score and breed?

In MLA Project W.LIV.0254, with respect to bedding for cattle, Banney, Henderson and Caston (2009) reported that ‘heavy cattle (over 380kg) will, depending on the surface of the pen floor and stability of the ship, incur more injuries than other cattle’.

For question 3, the Department supports Option 2 – Lower maximum weight (500kg). Even for cattle of 500kg, bedding should be provided (see section 7).

5.4 Minimum time sheep, goats, cattle and buffalo must remain at a registered premise prior to export by sea.

Questions about minimum hold times in registered premises

1) What is the minimum time that sheep and goats should be held in an outdoors registered premises prior to loading aboard an export vessel? Should other provisions be included regarding seasonal factors, feeding and pre-conditioning to shipboard rations?

2) *What is the minimum time that sheep and goats should be held in sheds registered premises prior to loading? Should other requirements be made for seasonal factors, feeding and pre-conditioning to shipboard rations?*

3) *Should the standards be amended to alter the specifications currently in place prescribing timelines for various classes of livestock to remain at a registered premises prior to export by sea? If so, what would you suggest?*

4) What would be the cost implications of any changes to the times livestock must spend in registered premises?

For outdoor premises and for indoor (shed) premises, the Department supports Option 2 – increased time in registered premises - 7 clear days excluding day of arrival and day of departure. This should apply for all species and all classes of livestock, for long and short haul voyages. The increased time allows animals to settle and adapt to export diets and provides more time to detect shy feeders and other health issues that will eliminate animals from export. The increased minimum time in registered premises should provide for lower mortalities and better outturn.

Livestock export is a commercial business and the exporter should pay the costs of compliance with statutory requirements. However, the Department notes that increased time in registered premises should contribute to lower mortalities and better results overall (hence, a return on investment).

5.5 Management of shy feeders and inanition in sheep

Questions about the management of shy feeders and inanition of sheep

1) What measures should be required to reduce the incidence of inanition and salmonellosis in sheep? Are the current requirements in the standards adequate to manage shy feeders and inanition in sheep?

2) If not, what changes would you suggest?

3*) What would be the cost implications of any proposed changes to these requirements?*

Inappetence is a serious risk factor for starvation and salmonellosis. On farm preparation can help to prevent inappetence at registered premises; Barnes et al., 2017 recommend the following strategies:

- Ensure sheep have up to date vaccination for scabby mouth and clostridial diseases (enterotoxaemia/pulpy kidney vaccination 10 - 14 days before transitioning to a new feed ration;
- Supplementary feeding of pellets;
- Compliance with ASEL guidelines;
- Ensure curfews do not extend beyond 12 hours, and/or give sheep dry feed before transport.

Research conducted by Barnes et al., 2018, on strategies to reduce inanition in sheep; found that it took until day 6 in the feedlot for more than 95% of sheep to be spending a minimum time at the feed trough per day. Sheep that spent on average 1.5 hours total time at the troughs per day were considered adapted, while those that spent less than half an hour were defined as inappetent.

These researchers were unable to provide recommendations on how to improve adaptation to feedlot pellets under shipping conditions.

Outbreaks of salmonellosis occur more commonly in colder and wetter months, but stress and high stocking density can also act as triggers. Land transport, shearing and environmental changes are stressors. Although these cannot be avoided, they should be strategically managed with the aim of improved welfare outcomes (Salmonellosis of sheep, DPIRD, 2018).

Barnes et al., 2017 also note that 'groups of animals which appear confident and eating well, may tolerate shearing on any day of feed lotting, and it may not interfere with their eating. However, groups of animals which are not relaxed and confident, and have more animals not accessing feed troughs may develop disease if taken away from feed for shearing'.

Please see the Department's recommendations in Section 5.2.

On board vessels

Stocking densities should be based on allometric requirements (k-value 0.047), to ensure that all animals have ready access to feed and water and that shy feeders are more readily identified. Shy feeders should be offered chaff over the pellets and, if necessary, moved to another pen for closer attention and ad libitum feeding.

The reformatted ASEL Appendix D – Registered Premises (hold times and feed requirements) does not specify requirements for sheep transported by sea (only for goats). However, the 2011 ASEL S3.8 requires sheep to be held at the registered premises for 5 clear days. The Department supports an extended time for both shed and paddocked animals to a minimum of 7 clear days, as mentioned in Section 5.4.

At the registered premises, shy feeders i.e. sheep that do not feed for 4-5 days, should not be loaded on a ship as this increases the risk of mortality. Vessels should carry some chaff, so that shy feeders can be encouraged to feed.

5.6 Pregnancy test requirements and limits

Questions relating to pregnancy requirements

No comment.

6. Stocking densities

6.1 On board stocking densities

Questions about stocking density

1) *Do you agree with the application of an allometric model for densities? What is the appropriate k value and why? Should the k coefficient value vary depending on the species and voyage length?*

2) Should the McCarthy Review application of a k coefficient of 0.033 be applied more broadly?

3) How would you standardise liveweights? Is it appropriate to apply a factor associated with curfew and anticipated weight during the voyage? How else can curfew and weight gains after leaving the registered premises be accounted for?

4) What is the financial impact of changing on board stocking densities?

The Department agrees with the application of an allometric model for prescribing space allowances for all species and for all sea journeys. The allometric model considers the relationship of body size to shape, and therefore provides a method of two-dimensional space allocation which is useful when determining how much room animals need for normal behaviour and posture. It is widely acknowledged that space allowance is a major factor influencing animal welfare (Petherick, 2007). In sea transport, it is critical to aid heat dissipation.

On short or long haul sea journeys, animals need space to move around, stretch and perform normal postures such as lying down to rest and then standing up again. They need to be able to walk to water and feed and in rough weather will choose to lie down for stability, rather than try to remain standing. On any journey greater than 12 hours, and certainly beyond 24 hours, animals will need to lie down and rest as muscle fatigue sets in. Notwithstanding this, the current allocations of space in ASEL do not allow sufficient space for animals to lie down and rest, as well explained in the submission of the AVA (2018).

As cited by the AVA (2018), Petherick (2007), and Petherick and Phillips (2009) use the equation A (m^2) =*k* x $W^{0.66}$, where A is area in m2; *k* is a constant, and W is the weight of the animal, to define the space requirement for postures assumed by animals (Figure 8, from AVA 2018). The AVA notes that the ASEL recommendations for minimum pen area per head were not determined using allometric principles. Rather, these values are based on the Marine Standards 1978, which were incorporated into Requirements for the Carriage of Livestock by Sea in 1981. Thus, the current ASEL provisions (Appendix H – Vessel stocking density requirements) on pen space per animal are effectively unchanged since 1978. These space allowances do not allow for free movement or repose (see Figure 9, from AVA, 2018).

Figure 8. *k* values for various postures assumed by animals (AVA, 2018)

Posture of the animal	***k*-value**
Standing (short-term transport) or lying on sternum with legs	*0.020*
Lying semi-laterally (legs folded against the body)	*0.025*
All stock lying simultaneously (without necessarily allowing ability to rise or free movement to feed/water)	*0.027*
Threshold below which there are consistent adverse effects on welfare outcomes in intensive housing	*0.033*
Able to move between lying and standing and readily access feed and water (equivalent to lying laterally with legs extended away from body)	*0.047*

*Figure 9. Minimum pen area per head for sheep and goats exported by sea according to ASEL (version 2.3, 2011; Table A4.1.5) with k-values included. Values in **bold** are considered to produce adverse welfare outcomes for intensively housed sheep (Petherick and Phillips 2009, in AVA Submission, 2018).*

Nov-Apr			**May-Oct**		**Nov-Apr**			**May-Oct**	
Live weight (kg)	**Minimum pen area (m_2/head)**	***k-value***	**Minimum pen area (m_2/head)**	***k-value***	**Live weight (kg)**	**Minimum pen area (m_2/head)**	***k-value***	**Minimum pen area (m_2/head)**	***k-value***
28	0.261	**0.029**	0.261	**0.029**	**51**	0.320	**0.024**	0.322	**0.024**
29	0.263	**0.028**	0.263	**0.028**	**52**	0.324	**0.024**	0.329	**0.024**
30	0.265	**0.028**	0.265	**0.028**	**53**	0.329	**0.024**	0.337	**0.025**
31	0.268	**0.028**	0.268	**0.028**	**54**	0.333	**0.024**	0.344	**0.025**
32	0.270	**0.027**	0.270	**0.027**	**55**	0.338	**0.024**	0.351	**0.025**
33	0.273	**0.027**	0.273	**0.027**	**56**	0.342	**0.024**	0.357	**0.025**
34	0.275	**0.027**	0.275	**0.027**	**57**	0.347	**0.024**	0.363	**0.025**
35	0.278	**0.027**	0.278	**0.027**	**58**	0.351	**0.024**	0.369	**0.025**
36	0.280	**0.026**	0.280	**0.026**	**59**	0.356	**0.024**	0.375	**0.025**
37	0.283	**0.026**	0.283	**0.026**	**60**	0.360	**0.024**	0.381	**0.026**
38	0.285	**0.026**	0.285	**0.026**	**61**	0.367	**0.024**	0.389	**0.026**
39	0.288	**0.026**	0.288	**0.026**	**62**	0.374	**0.025**	0.398	**0.026**
40	0.290	**0.025**	0.290	**0.025**	**63**	0.380	**0.025**	0.406	**0.026**
41	0.293	**0.025**	0.293	**0.025**	**64**	0.387	**0.025**	0.415	**0.027**
42	0.295	**0.025**	0.295	**0.025**	**65**	0.394	**0.025**	0.423	**0.027**
43	0.298	**0.025**	0.298	**0.025**	**66**	0.401	**0.025**	0.432	**0.027**
44	0.300	**0.025**	0.300	**0.025**	**67**	0.408	**0.025**	0.441	**0.027**
45	0.303	**0.025**	0.303	**0.025**	**68**	0.415	**0.026**	0.450	**0.028**
46	0.305	**0.024**	0.305	**0.024**	**69**	0.422	**0.026**	0.459	**0.028**
47	0.308	**0.024**	0.308	**0.024**	**70**	0.429	**0.026**	0.468	**0.028**
48	0.310	**0.024**	0.310	**0.024**	**75**	0.465	**0.027**	0.515	**0.030**
49	0.313	**0.024**	0.313	**0.024**	**80**	0.502	**0.028**	0.563	**0.031**
50	0.315	**0.024**	0.315	**0.024**	**90**	0.575	**0.030**	0.658	**0.034**

As stated by the AVA (2018):

“a lower k-value than 0.020 results in poor welfare outcomes as the space allocation does not allow balanced standing.”

Space allowances for sheep undertaking longer term transportation such as sea voyages of three to four weeks duration require a minimum k-value of ≥ 0.033 to reduce risks of adverse welfare outcomes (Petherick and Phillips, 2009).

The Department agrees that the *k* coefficient should be applied to all species and on all voyages because space allowance is a key determinant of animal welfare.

In its submission, the AVA states:

“If a 17% increase in space allowance is applied to the current ASEL requirements, sheep ≤ 32kg and sheep ≥75 kg all months of the year, and sheep ≥ 68kg between May and October, would receive a space allocation with a k value ≥ 0.033, the value considered to reduce adverse welfare outcomes.” “However, most sheep that are exported are between 40kg and 60kg and a 17% increase will be well below what is required to reduce adverse welfare outcomes.” (AVA, 2018)

Rather than setting a minimum *k* value of 0.033, the Department recommends the establishment of a higher standard, to produce better welfare outcomes. The *k* values require verification with a range of species under different thermal conditions, and for transportation under different conditions of vehicle and vessel stability (Petherick and Phillips, 2009). Bearing in mind this need for verification, and knowing that some exporters will apply the bare minimum standards, the Department proposes setting a margin of safety by adopting a *k* value 0.047. This will ensure animals have enough space to access feed and water and move freely between standing and lying, which is important so that other animals are not disturbed or trampled on. The additional space may also assists heat dissipation, which is crucial for shipments that present a risk of heat stress, e.g. voyages to the Middle East during the northern summer. Decreased stocking densities may also help personnel monitor animals.

Weighing of livestock

Livestock should be weighed by putting the vehicle on a weighbridge at the port by an independent person not affiliated with the exporter. The load plan should be based on true weights and take account of weight gains during the voyage to provide for calculation of the maximum weight loaded. The current process is unsatisfactory (records available to the Department). Records should be retained for at least 3 years.

The McCarthy Review (2018) highlights the fact that the current ASEL does not specify whether ‘weight’ refers to an empty body weight, a curfew weight (12 hour curfew) or a full weight. These weights vary by up to 12%. The Department recommends that if there is a pre-transport curfew, the average sheep should be considered as weighing 10% less than its pre-curfew weight, taking into account that cattle and sheep consume 2-3% of their live weight per day, and sheep can drink 6-12 litres per day, depending on diet.

The AVA points out that underestimation of body weight will reduce the *k* value and therefore the welfare of animals on a vessel (AVA, 2018). Animals should be weighed

just prior to loading onto the vessel, and anticipated weight gains added to arrive at a maximum live weight.

The Department has been informed that sheep are weighed at the registered premises, but to date, the records have not been made available to the Department's inspectors.

6.2 Registered premises stocking densities

Questions about registered premises stocking densities

No comment.

7. On board resources

7.1 Management of bedding and ammonia levels

Questions about bedding and ammonia levels

1) What specific requirements (i.e. volume, usage, and components) should exist for bedding material for export consignments of cattle and sheep? Should these apply to all voyages or only some? Should it apply to all species or only some?

2) Should the standards be amended to alter the specifications currently in place to manage provision of bedding for livestock and ammonia levels on vessels? If so, what would you suggest?

3) Should there be a requirement that bedding is used to manage an appropriate faecal pad? Should a statutory reserve amount of bedding be required as a contingency amount to manage any flooded pens?

4) *What would be the costs of any changes to the current arrangements?*

The Department agrees with provision of bedding material for all species and for all voyages, as well as an independent scientific review to determine volume, usage and material requirements for all species transported by sea.

In relation to sheep, a brief review of the literature and evidence obtained through inspections done by animal welfare inspectors of the Department, calls into question Dr McCarthy's statement: "the sheep pad makes excellent bedding. There is no need for additional sawdust or any bedding additive under normal circumstances."

Health and welfare problems associated with a wet or excessively dry sheep pad are documented (Banney, Henderson and Caston, 2009). The pad continues to aggregate moisture, from urine, faeces and water spillage and leaks from troughs. This moisture, together with environmental heat and humidity on voyages to the Middle East, compounds the risk of heat stress.

- Good management of the sheep pad aims to:
- Lower moisture in the air and reduce the pen wet bulb temperature (WBT)
- Minimise the amount of skin and fleece contamination,
- Improve the comfort and ease of standing, walking, lying down and standing up by minimising pugging, and
- Maintain low levels of ammonia in the pen environment.

An increase in WBT can lead to:

- Heat stress complicated by deteriorating manure coating hair and wool,
- Deterioration of the manure pad resulting in poor hygiene and increased risk of infection associated with lameness and abrasions, and
- Increased ammonia emissions, with health risks to livestock and crew.

From Banney, Henderson and Caston, 2009

The recommended choice of bedding material from the main ports of Australia is kiln-dried softwood sawdust and shavings.

For sheep, automated ventilation and regular application of sawdust and/or straw provides dry and more comfortable bedding and can improve animal welfare.

For cattle, the injuries sustained from slipping on hard surfaces can lead to mortalities. Evidence obtained by animal welfare inspectors of the Department point to a need for more care with respect to flooring and the prevention of falls. Cattle prefer clean dry bedding, and absorbency is the most important quality. Banney, Henderson and Caston, 2009 recommend the use of kiln-dried sawdust and wood shavings for cattle bedding. Quantity must be sufficient, and decks should be washed down regularly (at least every 3-4 days) and bedding replaced. Also see comments on Q. 2.

On the specifications for bedding, the Department supports Option 3, as well as some additional suggestions from submissions to the 2012-13 review:

- Enough sawdust/straw should be provided/loaded onto the vessel to allow bedding replacement every 3-4 days of the voyage duration, to coincide with deck washing programs (every 3-4 days), as well as enough to have the ship ready at loading and to provide enough sawdust for discharge points, ramps and traffic areas (Stage 2: Issues Paper, 2018)

The Department also supports amended standards to address ammonia. The critical level for atmospheric ammonia in cattle, sheep and goats should be set at 25 ppm – a level that balances animal welfare requirements with levels that are reasonably achievable by best practice in the live export industry (Costa et al., 2003). These authors submit that atmospheric ammonia should not normally exceed these levels in outdoor feedlots, but cattle undergoing sea transport, will experience atmospheric ammonia exceeding 25 ppm during some voyages and in some decks.

Atmospheric ammonia on board vessels should be logged, and when recommended levels exceeded, corrective actions put in place. Costa et al. recommend the following actions to offset high ammonia levels: provide adequate ventilation; change bedding; feed lower protein diets containing acid salts.

The Department agrees that bedding should be used to manage the faecal pad to meet the aims listed at Q1. Furthermore, there should be a statutory reserve of bedding as a contingency to manage flooded pens.

While reduced mortality rates may not be attributable to bedding management alone, the cost is justified in terms of addressing the welfare issues arising from discomfort and pain associated with abrasive wounds, lameness due to injury and difficulties with

movement and accessing food and water when the pad is boggy.

Livestock export is a commercial business and the exporter should bear the cost of compliance with statutory requirements.

7.2 Water, fodder and chaff requirements on vessels

Questions about water, fodder and chaff requirements on vessels

1) Should paragraph 3A.3.2 (c) be amended as follows:

a) 'For all long-haul and extended long-haul cattle voyages, at least 1 per cent of the fodder required for cattle must be chaff and/or hay.'

2) There are a range of issues relating to shipboard fodder requirements being reviewed within Industry. In the interim, are there any other changes to water, fodder and chaff requirements that need to be addressed?

3) *Should automated water systems be mandatory on all voyages? What would be the cost associated with this change and who should pay?*

4) Should there be extra fodder provisions for voyages longer than 10 days?

All shipments should be provided with sufficient feed for the journey plus a margin to allow for unforeseen circumstances. The provision of food and water is a basic welfare requirement for all animals. Extra fodder should be provided on voyages longer than 10 days, to mitigate the risk of delays. The Department understands that fodder frequently runs out because of insufficient loading and/or delays in the journey, or when waiting to unload. Insufficient feed provokes bullying and shy feeders are even more at risk.

For all long-haul and extended long-haul cattle voyages, a minimum percentage of the fodder required for cattle should be chaff and/or hay. The Department recommends that the percentage be higher than 1% because 1% will get wet during the voyage and, once mouldy, hay is useful only as bedding.

Recommendations

Chaff should be provided on board for:

- To encourage shy feeders to eat;
- To assist control of diarrhoea in cattle;
- To mitigate problems of bloat arising from consumption of fines.

During inspections of live export vessels in Fremantle, the Department has seen empty drinking troughs and excessive faecal contamination of troughs. On one occasion, inspectors were advised by a crew member that if a ballcock valve leaks, the water supply to the trough is simply turned off, and water provided by hand. On this ship, we saw empty troughs and thirsty cattle (see photos at Figures 5, 6 and 7).

Figure 5. Faeces in water trough

Figure 6. Fouled water trough

Figure 7. Dry water trough

Recommendations

- All livestock vessels should be equipped with fully automated watering systems and staffed with sufficient crew member(s) who are qualified or experienced in the maintenance and repair of the system;
- Water and feed troughs should be checked daily and troughs emptied, cleaned and refilled.
- There should be regular maintenance of ballcock valves, hoses and taps, and immediate repair of leakages.

Livestock export is a commercial business. The operator should bear the cost of compliance with statutory requirements.

8. On board personnel, animal management and care

8.1 On board personnel and the monitoring and management of animals

Questions about on board personnel and the monitoring and management of animals

1) *In addition to the ship's crew, which on board personnel should accompany livestock export consignments? Should this apply to all consignments? Please provide detail.*
2) *Should the current requirements in the standards be amended and, if so, what elements should be changed?*
3) *What is your view of the three options for AAVs accompanying voyages proposed during the 2012-13 review, and why?*
4) *Does the requirement for Independent Observers now in place modify or change the need for AAVs to accompany some or all voyages?*
5) *What do you believe the roles and responsibilities of the following personnel should be, and why?*
6) *If AAVs are to be placed on more or all voyages, what is the additional cost and who should pay?*
7) *Is it a practical requirement for stock handlers on board to be able to observe all animals at all times during a voyage? If not, what requirement should exist to ensure animal health and welfare is appropriately monitored during a voyage?*
8) *If AAVs are to be placed on more or all voyages, what is the additional cost and who should pay?*
9) *Is it a practical requirement for stock handlers on board to be able to observe all animals at all times during a voyage? If not, what requirement should exist to ensure animal health and welfare is appropriately monitored during a voyage?*

The Department is concerned that the current model – the use of Australian Accredited Veterinarians (AAV) employed by the exporting company – presents an unacceptable conflict of interest. The registered veterinarian is responsible to address and report on animal health and welfare issues. He/she is the sole person responsible to report on problems to the regulator (DAWR) and accountable to the regulator and the general public in relation to the welfare of animals on livestock vessels.

The number of live export companies in Australia is limited and an AAV who raises significant concerns about animal welfare is likely to be less acceptable to an exporter than a veterinarian who does not. To ensure a meaningful process for reporting and ensuring compliance with ASEL, the Department recommends that the accredited veterinarian be independent of the exporting company. He/she should be remunerated by DAWR and the costs fully recovered from the exporting company, using a model similar to that used in the supervision of export abattoirs.

The Department agrees with Option 3 of the 2012-13 review insofar as we agree that it should be mandatory for an independent veterinarian to accompany all consignments. The recent action by DAWR to place independent observers on shipments that are accompanied by an AAV suggests that this concern is shared.

We note the proposal by DAWR that the independent observer does not need to be a veterinarian. However, the Department considers that a veterinarian should accompany all live export shipments.

If DAWR decides to maintain the current model of AAV supervision (with or without an independent observer), the Department recommends that no AAV accompany more than three consecutive shipments on the same vessel.

The Department considers that more stockpersons are needed. The recommendation in ASEL *2012-13 ('one accredited/approved stockperson per 2,500 to 3,000 head of cattle, and one accredited/approved stock person per 40,000 to 60,000 sheep')* is inadequate to observe all animals daily.

Roles and responsibilities of personnel

a) Veterinarian/AAV. Registered veterinarians are qualified to diagnose, prescribe, store and administer veterinary (schedule 4) medicines, and perform post mortem investigations. He/she provides professional and technical expertise and scientific advice to stockpersons and the crew on animal health and welfare issues and reports animal health and welfare issues to the regulator.

b) Stockperson. The stockperson has technical expertise on animal husbandry, handling and welfare. He/she helps the ship's crew monitor animals and manage the conditions in which animals are held. Stockpersons supervise and assist cleaning of feed and water troughs, and ensure appropriate clean water and food is available to livestock at all times. Stockpersons identify animal welfare issues, and provide or supervise remedial actions. Stockpersons should be accredited in animal handling, husbandry and welfare in the context of live export and should have training/experience in the species that are being shipped.

The practicality of observing all animals on livestock vessels

It should be possible for livestock handlers to observe animals at all times during a voyage. However, this is not practical with double-tiered vessels and the Department calls for the immediate phasing out of these vessels. We do not agree that these vessels should continue to be used until 31 December 2019 (Marine Order 43 (Cargo and Cargo Handling - Livestock) 2018).

For proper observation of animals, it is necessary to have sufficient personnel per head of livestock. The introduction of CCTV monitoring on all decks, to cover all pens, is also encouraged.

The proposal for DAWR to pay the AAV and recover the cost from the exporter would not increase direct costs to the exporter. However, to the extent that there are cost increases, livestock export is a commercial activity. The exporter should bear the costs of compliance with statutory requirements.

Questions about vulnerable/special classes of animals

1) Are there specific requirements that need to be in place for vulnerable or special classes of livestock, which are currently not addressed in the ASEL? Which categories of stock and what additional requirements are needed? Could these be managed under specific management plans, or departmental discretions?

2) Should the requirements in the standards be amended to address concerns raised about safeguards for vulnerable/special classes of animals? If so, what changes should be made?

The higher rate of mortality of rams is well recognised (Norman, 2017). Rams should not be transported during high risk periods and more care should be taken when shipping them, including lower stocking rates (see Section 3.1).

9 Minor amendments

9.1 Exclusion of deer and camelids

ASEL Review Technical Advisory Committee interim recommendation:

1) Removal of the requirements relevant to exporting deer and camelids by sea, to be replaced by the provision of consignment specific management plans. These plans will initially cover the requirements contained within ASEL but will be required to be customised to address specialised animal health and welfare requirements for these high-risk consignments.

a) Specific comments made by Deer Industry Association of Australia will be considered for updating the minimum requirements for deer consignments.

No comment.

9.2 Updating definitions and body condition scoring

ASEL Review Technical Advisory Committee interim recommendation:

4) Definitions for 'pastoral' and 'station' sheep to be included as agreed in 2012-13 and in Appendix A of this issues paper.

The Department agrees with the ASEL Review Technical Advisory Committee interim recommendations.

5) Updated and industry standard body scores to be included as agreed in 2012-13, as proposed by the Australian Buffalo Industry Council, and as detailed in Appendix B of this issues paper.

No comment

6) Terms to be quantified through drafting the standards text to remove legal uncertainty of certain standards. Definitions list to be thoroughly reviewed, considering the Australian Animal Welfare Standards and Guidelines definitions.

The Department agrees with the ASEL Review Technical Advisory Committee interim recommendations.

9.3 On board veterinary medicines and equipment

ASEL Review Technical Advisory Committee interim recommendation:

5) Amend ASEL to reflect that Appendix F Table #10 applies to all classes of cattle and buffalo exported by sea, not only slaughter and feeder classes.

6) Appendix F—Mandatory veterinary medicines and equipment—is updated:

a) Upon completion of research by Livecorp into Shipboard drug use

b) In consultation with experienced shipboard AAVs

c) With consideration to the causes of poor welfare outcomes and mortalities upon review of consignments

7) Divided into minimum requirements for the voyage and minimum doses per quantity and class of animals.

The current mandatory list of minimum veterinary medicines in Appendix F of the (reformatted) ASEL is inadequate. Provision of veterinary supplies sufficient to treat 30 cattle and 10 sheep is meaningless when there are tens of thousands of animals onboard. Appendix F does not even require carriage of sufficient syringes and needles to administer the injectable products in accordance with good veterinary practice.

Pink eye (keratoconjunctivitis) is a highly contagious disease and infection on board a ship can spread rapidly and affect many animals. ASEL Appendix F currently requires that vessels carry 1 box of Orbenin, i.e. 20 tubes - at best, sufficient to treat 40 sheep if one half of a tube is allocated to each sheep.

In May 2018, the Department inspected a vessel that arrived from Australian port *en route* to the Middle East. Clinical pink eye was seen in an estimated several hundred sheep on the vessel, many showing stage 3 infection. The problem was attributed to dusty conditions during the voyage to Fremantle. Treatment of the problem in accordance with normal veterinary practice was not possible.

Pinkeye may resolve at around 20 days, providing there are no complicating factors. However, the conditions on a live export vessel (stress, close contact, dust and flies) may exacerbate the disease. If the disease is unresolved, ulceration of the cornea may cause the eyeball to collapse, resulting in blindness (Radostits et al, 2007). Animals with pink eye, even in the early stages, have difficulty finding food - an additional problem for shy feeders. Blindness is an additional stressor – animals that are blind in both eyes are considered ‘not fit to load’ by Meat and Livestock Australia (‘Is it fit to load?’ 2012)

The Department recommends that vessels be required to carry supplies of veterinary drugs sufficient to treat commonly encountered diseases and injuries, commensurate with the number of animals on board. Treatment regimes should be consistent with standard veterinary practice, including the use of analgesics.

The Department agrees with the ASEL Review Technical Advisory Committee’s interim recommendations but also calls for a more realistic approach. The Department also encourages a review of the use of veterinary medicines on live export shipments.

9.4 Minimum liveweights for export

ASEL Review Technical Advisory Committee interim recommendation:

8) Amend 1A.3.4(d)(i) to increase the minimum liveweight of sheep for export by sea from 28 kg to 32 kg

9) Amend 1A.3.4(e)(i) to increase the minimum liveweight of goats for export by sea from 22 kg to 24 kg

The Department agrees with the ASEL Review Technical Advisory Committee interim recommendations that minimum liveweights should be increased.

9.5 Secondary inspection of goats prior to export

ASEL Review Technical Advisory Committee interim recommendation:

10) Paragraph 1A.1.1 (b) should be amended to:

a) 'When goats are exported by sea, they must be inspected by an authorised officer or AAV at least once during export preparation, (excluding the day of delivery to the registered premises and day of final inspection prior to loading), to confirm the goats have been held in the registered premises for five (5) days and fed appropriately as per Appendix D.'

b) apply to all sea voyages of goats.

No Comment

9.6 Horn requirements

ASEL Review Technical Advisory Committee interim recommendation:

11) Consistent with the Land Transport Standards 'Horned bulls should have the nonvascular tip removed to a diameter of three cm.'

a) Paragraph 1A.3.2 (b) should be replaced with a requirement that horned cattle must have the nonvascular horn tip removed to a diameter of three centimetres.

12) No change to paragraph 1A.3.3(b).

13) Paragraph 1A.3.5 (b) for goats with horns, should be amended to read …. 'If horned, with horns that are likely to restrict access to feed and water during transport and/or endanger other goats or stock handlers, the horns must be tipped to remove the points, with only the solid non-vascular horn cut.'

14) No removal of long horn management plans.

The Department agrees with the ASEL Review Technical Advisory Committee's interim recommendations.

9.7 Sourcing of sheep through Darwin, Weipa or Wyndham

ASEL Review Technical Advisory Committee interim recommendation:

15) Change the requirement of paragraph 1A.3.4 (d)(v) to be geographic – all ports north of 20 degrees South

No comment

9.8 Water engorgement management

ASEL Review Technical Advisory Committee interim recommendation:

16) The provision of water to animals within a registered premise is under the domain of state or territory legislation and the Australian Animal Welfare Standards and Guidelines. Paragraph 2B.1 (c) to be deleted

The Department does not agree with the ASEL Review Technical Advisory Committee interim recommendations. We support inclusion of 2B.1 (c) –*" 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".*

This is a reasonable precaution. Western Australia has not yet implemented the Australian Animal Welfare Standards and Guidelines for Land Transport of livestock.

9.9 Proposed duplication areas with the Land Transport Standards

ASEL Review Technical Advisory Committee interim recommendation:

17) While ASEL 2B.6 (a) and (b) address issues that come under the domain of the Australian Animal Welfare Standards and Guidelines and may be considered as duplication, are considered fundamental to ASEL and are to be retained.

18) Appendix B contains shorter periods of curfew and travel before rest for animals to be exported. This is due to the cumulative stress of transport through the supply chain. Appendix B should be retained.

The Department agrees with the ASEL Review Technical Advisory Committee's interim recommendations.

9.10 Extension of long-haul voyage requirements

ASEL Review Technical Advisory Committee interim recommendation:

19) Paragraph 3A.3.2 (h) should be amended as follows:

a) 'For all sea voyages via the Suez Canal, the Cape of Good Hope, the Panama Canal or Cape Horn, or via any other route where the voyage is expected to be longer than 30 days, the statutory reserve of additional fodder that must be loaded must be increased to at least seven (7) days.'

The Department agrees with the ASEL Review Technical Advisory Committee's interim recommendations and notes that, for provision of an additional 7 day fodder reserve, there will be a requirement to reduce the stocking density. This is in addition to our recommendation that stocking density be decreased for reasons cited elsewhere in this submission (see section 6).

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