

LiveCorp Submission

July 2019

ASEL Air Transport Review

Response to the Issues Paper on Review of the Australian Standards for the Export of Livestock: Air Transport

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1 Introduction

LiveCorp welcomes the opportunity to respond to recommendations contained in the *Draft Report Review of the Australian Standards for the Export of Livestock: Air Transport*. In this submission we comment on each of the recommendations in the *Draft Report*. In many cases the comments made simply record our agreement with, or acceptance of, the recommendation. In a minority of cases, we do not agree with recommendations made or believe that further changes are required. In these cases, the submission contains supporting evidence for not agreeing with the draft recommendations or for the further changes proposed by LiveCorp.

As with LiveCorp's submission to the *Issues Paper*, in responding to recommendations contained in the *Draft Report* LiveCorp has worked with a LiveAir consultative committee. This committee was able to supplement the extensive research knowledge of LiveCorp with practical and operational knowledge. Where research results did not exist or were ambiguous, the views of this consultative committee, based on practical and operational knowledge, have been embodied in comments contained in this submission.

2 Sourcing and preparation of livestock

The *Draft Report* contains 14 recommendations to ASEL related to the sourcing and preparation of livestock for air transport.

Of these 14 recommendations three involve species that fall outside the responsibilities of LiveCorp, so no comment is made. These are:

- *Recommendation 1): That the standards require a management plan for the sourcing and export of deer under 6 months of age.*
- *Recommendation 4): That the standards (S6.15) be amended to prevent male deer being sourced for export by air unless they have hard antlers removed leaving only buttons, they are not in the first two weeks after velveting and they are outside the roar and rut periods if they are over one year of age.*
- *Recommendation 5): That the rejection criteria in the standards be amended to prevent deer being exported that have broken velvet.*

Another five recommendations in the *Draft Report* were supported in LiveCorp's submission to the *Issues Paper* and, therefore, require no further comment. These are:

- *Recommendation 3): That the body condition score tables for beef and dairy cattle, buffalo, sheep, goats, camels and alpacas included in Appendix A be adopted for air transport.*
- *Recommendation 10): That the standards require a management plan for livestock that are exported with young at foot. This plan must address possible risks during transport including the management of livestock during delays, access to water, rest periods and any additional space requirements.*
- *Recommendation 12: That the requirements for horned cattle, buffalo and sheep outlined in Section 2.6.3 of this report be adopted for air transport. That is;*
 - a) *for cattle, no longer than 12 cm in length and tipping should only remove a solid, nonvascular portion of the horn, and result in a blunt horn end;*
 - b) *for buffalo, if the horns are no longer than the spread of the ears; and*
 - c) *for sheep, are no longer than one full curl.*
- *Recommendation 13: That the standards (ASEL v2.3, S6.12) for sourcing horned goats for export by air be amended in line with the Land Transport Standards: Horn trimming or removing sharp horn points is recommended to minimise injury to other goats. Where tipping is applied for bucks, horns should be tipped within 2.5-5 cm from the tip (no further down than two cm diameter of horn) and for does less than two cm from tip to avoid sensitive zones. Tipping, where applied, should be done at least seven days before transport.*
- *Recommendation 14: That the standards require a minimum 24 hour rest period for any livestock that have been returned to the approved premises or property of origin after being transported to the airport, and prior to being reloaded for transport back to the airport.*

LiveCorp assumes that, in the absence of further requests for information, these recommendations will remain in the Committee's final report.

LiveCorp agrees with a further two recommendations in the *Draft Report* relating to the *Sourcing and preparation of livestock*:

Recommendation 2): That the standards require a management plan for the sourcing and export of miniature breeds and other livestock that do not meet the minimum liveweight requirements.

Recommendation 11: That the standards prevent livestock that have given birth in the five days prior to the expected date of departure, from being sourced for export.

Recommendation 2 provides a sensible solution for breeds that, because of innate genetic characteristics, may have previously been precluded from air transport due to the blunt regulatory instrument of specifying minimum weights.

Recommendation 11, although blunt, is accepted by LiveCorp. Livecorp notes that the approach taken in the Land Transport Animal Welfare Standards and Guidelines is not to prohibit travel but to state that travel must be carefully managed to minimise risk to animal welfare.

The remaining recommendations under *Sourcing and Preparation of Livestock* relate to the transport of pregnant livestock and non-farmed livestock. Further comments on the Committee's recommendations in these areas are to be found below.

2.1 Recommendations related to the carriage of pregnant livestock

The draft ASEL Air review report contains two recommendations related to pregnancy testing and the carriage of pregnant animals:

Recommendation 6): That the pregnancy testing requirements detailed in Appendix B be adopted for livestock exported by air.

Recommendation 7): That the standards require a management plan for livestock exported during the third trimester of pregnancy. The management plan must address potential risks during transport including the management of livestock during delays, access to water, rest periods and any additional space requirements.

LiveCorp accepts both recommendations. Recommendation 6 was supported in LiveCorp's submission to the *Issues Paper*. Recommendation 7, although not discussed in our initial submission, is not opposed.

LiveCorp also notes the following statement in the *Draft Report*:

"The committee agreed that the department should be able to extend the validity of pregnancy tests beyond 30 days where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate that the extension will not impact on animal welfare outcomes" (p14).

Notwithstanding the Committee's recommendation to extend the validity of pregnancy tests in certain (very limited) circumstances, it is the strong view of LiveCorp that the current limit for breeding livestock of 30 days before the validity of a pregnancy test is deemed to have expired:

- is arbitrary;
- is not justified scientifically;
- adds to costs; and
- compromises welfare.

In drawing this conclusion LiveCorp distinguishes between the role performed by a pregnancy test for feeder and slaughter livestock versus breeding livestock. For feeder and slaughter livestock the purpose of the test is merely to provide a “yes/no” answer on whether an animal is pregnant. This is because the regulatory requirement that must be met in order to export feeder and slaughter livestock is “*determined not to be detectably pregnant by a valid pregnancy test*”. Feeder and slaughter livestock found to be pregnant are prohibited from being shipped. Given the regulatory objective of pregnancy testing feeder and slaughter livestock is to prohibit export if they are found to be pregnant, it makes sense to limit testing to a narrow window prior to shipment. If a test was performed well before shipment occurred, animals in *early* stages of pregnancy may be missed and wrongly shipped.

The regulatory purpose of pregnancy testing breeder livestock is different entirely: it is not merely to provide a “yes/no” answer, but rather to provide assurance that livestock will be no more than a regulated number of days pregnant. This leads to very different considerations on when the test should be conducted to achieve maximum certainty.

It is well known that greatest certainty on when the date of conception occurred is neither in the very early nor in the later stages of pregnancy, but in the early to middle-stages. For example, for cows, greatest certainty on the date of conception occurs when testing takes place between 5 and 14 weeks. Given greatest accuracy is achieved in this window and the maximum days of gestation at the scheduled date of departure is regulated at 250, it is unclear why there is a need to limit testing to the last 30 days prior to export. No apparent reason exists for this regulatory imposition.

There can also be the situation where an exporter is sending young heifers, intended for breeding but not meant to be pregnant at time of export. The exporter conducts an examination at the time of selection (up to 70 days from export date) to determine that they are not pregnant, but are capable of breeding (i.e. no issues exist with their reproductive organs). Even though the test indicates they are not pregnant, the heifers are still shipped as breeding animals since that is their intended purpose. This leads to the following scenario:

- A test has been conducted on the heifers up to 70 days from the export date that indicates they are not pregnant.
- A declaration is supplied by the owner/exporter stating that they have not been ‘joined’ in the interim.
- The heifers are shipped as breeding animals and can be up to 250 days pregnant at shipping date – that is if they had been joined (contrary to the owner/exporter’s declaration) gestation days would still be well within regulatory limits.
- Nevertheless, the heifers have to be re-tested if the original test falls outside the 30 day regulatory window.

As these heifers are usually between 9 and 12 months old, the welfare implications and additional stress of retesting is unjustifiable. Yet, we are aware that this does occur on occasion – both for air and sea shipments.

The issue is important since exporters regularly test for pregnancy on farm when livestock are being selected, but the selection period may fall outside the 30-day window. The testing undertaken by exporters on-farm is, of course, to ensure that selected livestock are pregnant (typically, in the early or middle stages of pregnancy, with any in late stages being rejected) or capable of becoming

pregnant (that is, unjoined heifers are not “free-martins”, an infertile female without ovaries and often without a vagina¹).

When on-farm testing occurs more than 30 days from the date of shipment, a not uncommon event, livestock need to be pregnancy tested twice. This not only adds to costs (estimated at \$20 per test) but also raises welfare concerns, particularly for cattle where the testing method involves manual palpation.

LiveCorp suggests it is not sufficient to recommend that the 30-day window may be extended at the discretion of the Department under certain circumstances, but rather that there needs to be justification of why the 30-day window exists at all for breeder livestock.

- *LiveCorp proposal for an additional TAC recommendation: That the window for pregnancy testing, currently set at 30 days, be increased to 70 days for breeder livestock.*

Increasing the pregnancy testing window to 70 days would obviate the need for double testing with its economic and welfare impacts, but still effectively provide the required regulatory outcome.

LiveCorp recognises that individual customers and countries may still require testing within X days from date of shipment and this may result in double testing. Currently, however, on many occasions, it is the ASEL regulations that result in double testing for no apparent justification and with detrimental welfare implications.

LiveCorp notes that the only reference to the 30 days in the final ASEL report recommendations was the following:

“In relation to the pregnancy testing window prior to export, the committee agreed to retain the existing 30 day requirement. However, there appears to be an issue with regulatory inflexibility, and unnecessary re-testing must be avoided from a welfare perspective. It was the committee’s considered view that the department should be able to extend the validity period of an existing test beyond 30 days where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate that the extension will not impact on animal welfare outcomes. The decision on whether to approve an extension should be taken at the regional level, rather than requiring a formal dispensation from the Canberra office. Clear guidelines should be developed on when an extension may be granted.” (p20).

This broad brush approach to the 30 day requirement is not the best approach. The 30 day limit for pregnancy tests needs to be scientifically justified across all the circumstances to which it is to apply. As noted above, LiveCorp has been unable to uncover a reasonable explanation for the 30 day requirement in the case of breeder livestock (for either air or sea).

2.2 Recommendations related to non-farmed livestock

LiveCorp appreciates that the Committee closely examined material contained in our *Issues Paper* submission when considering ASEL provisions related to non-farmed livestock. Despite this close examination, except for one point of regulatory clarification, the Committee chose to retain existing ASEL provisions for non-farmed goats, without, in our view, the presentation of solid justification. Moreover, the Committee has added an additional requirement for buffalo.

Recommendation 8): That the standard requiring goats to be conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days before transfer to a registered or

¹ Industry sources indicate that free-martin run at about 1-2% in dairy herds.

approved premises (S6.13) be amended to apply to non-farmed goats only (that is rangeland or feral goats).

Recommendation 9): That the standard include a requirement for non-farmed buffalo to become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

With respect to evidence underlying Recommendations 8 and 9, LiveCorp certainly agrees with the following statement made by the Committee in the *Draft Report*:

“...there is little published information regarding the required times or suitable methods for adaptation of non-domesticated animals to being handled, eating processed feeds and drinking from troughs. The effect of longer times (for example beyond the mandatory 14 days required for camels) on improving animal health and welfare outcomes is unknown”.

However, notwithstanding a recognition that the *“effect of longer times (for example beyond the mandatory 14 days required for camels) on improving animal health and welfare outcomes is unknown”* the Committee chose to retain the current 21 days for goats.

In maintaining 21 days the Committee relied on two pieces of evidence:

- That goats have the highest mortality rate for animals exported by air.
- A study by Miller et al 2016 on the benefits of time spent by rangeland goats in feedlot type situations.

The first piece of evidence, that goats have the highest mortality rate for animals exported by air, is questionable. Over the last 5 years (2014 to 2018, inclusive) sheep mortalities, at 0.15%, have been higher than goat mortalities (0.05%). Similarly, over the last 10 years (2009 to 2018, inclusive) the mortality rates for sheep is 0.16%, higher than for goats which recorded mortalities of 0.02%. It is recognised that over the past 3 years (the period referenced by the Committee) there have been slightly more goat mortalities than sheep mortalities, but the difference would not be statistically significant. Over this period 36 goat mortalities have been recorded (0.04%) and 31 sheep mortalities (0.02%), both extremely low.

It is submitted that looking at all the evidence (including the five and ten year data) the valid conclusion to draw is that mortalities amongst acclimatised rangeland goats are either no different (statistically) from farmed sheep or that mortality rates are statistically significantly higher for farmed sheep than for goats². What we can be certain of is that over a 5 and 10 year period the following statement is incorrect: goat mortalities are greater than sheep mortalities and this is statistically significant. This appears to be the inference that the Committee was trying to draw.

The second piece of evidence, namely the study by Miller et al, although interesting, is not directly relevant to the issue of optimal time spent in feedlot type conditions. The focus of the Miller et al study was **not** to test different periods spent in feedlot type conditions, but the amount of human contact experienced. Both groups of goats in the study by Miller and his co-authors spent 21 days in feedlot type conditions – the only difference was that for one group of goats a stockperson entered the pen twice daily and calmly walked amongst the goats for 20 minutes, whereas for the other group a stockperson only entered the pen to fill up feed bins (weekly) and clean water troughs (daily) without interacting with the goats. The Miller et al study, therefore, provides little guidance

² Published data was not in sufficient detail to allow LiveCorp to statistically test which of these statements is correct: (i) no statistical difference in mortality rates between goats and sheep or (ii) statistically significant higher mortalities for farmed sheep.

on whether 21 days spent in feedlot type conditions is better than 14 days, 7 days or some other number.

Although the Miller et al study provides no guidance on the optimal time to be spent in feedlot type conditions it does point to the importance of what is done during the time specified. A statement made by the Committee in the *Draft Report* also points to this fact: *“It has been found that the methods employed to domesticate livestock during the preparation process are regarded as more important than the length of the process (Neindre et al. 1996; Flint and Murray 2001; Gherardi and Johnson 2004)”* – p15. This highlights that simply specifying a minimum number of days for animals to be kept in feedlots represents a blunt regulatory instrument. Depending on the interventions carried out while animals are in feedlots, a significantly reduced or increased number of days may be necessary.

Similar comments to those above can be made with respect to Recommendation 9 on buffalo. Over the last 10 years, 87 buffalo have been transported by air without any mortalities. To require these buffalo to spend 21 days in feedlot type conditions imposes significant additional costs, for what is an unknown benefit or outcome. It is also unclear what evidence the Committee relied upon to determine that 21 days was appropriate for buffalo rather than the 14 days specified for camels.

The Committee itself recognises little evidence exists on the effectiveness of imposing a minimum time for non-farmed livestock to spend in feedlot type conditions and that factors in addition to a minimum time are important. In stipulating minimum times for goats and buffalo the Committee has regulated to one input measure and has chosen not to regulate to outcomes.

The Committee correctly observed that the LiveCorp *Issues Paper* submission had *“stopped short of recommending what time period would be appropriate”* (for goats in feedlots). This is because LiveCorp is firmly of the view that the industry should be regulated to outcomes. This is in contrast to prescribing inputs for every step of the live export process – an inefficient and impossible task. An outcomes-based regulatory model is what was initially intended in this ASEL Review and this is a good example of where it should be applied.

3 Penning arrangements and crate design

The Committee made four recommendations associated with penning arrangements and crate design.

Two of these recommendations involve species that fall outside the responsibilities of LiveCorp, so no comment is made. These are:

- *Recommendation 15) That the space allowances in Appendix C be adopted for alpacas (this table is based on the Land Transport Standards space allowances).*
- *Recommendation 16) That the standards require camels over 300 kg liveweight to be penned for air transport in accordance with a management plan.*

3.1 Penning similar animals together

A third recommendation is accepted by LiveCorp:

- *Recommendation 17) That the standards require livestock to be penned for air transport with the same species, class, weight and gender (note: castrated males may be penned with females however whole males must be penned separately, unless immature). Particularly small (low weight) animals must be crated with similar weighted animals or the crate must be divided so that animals of unequal size are not mixed together in a given space.*

The Land Transport Standards and Guidelines contain similar provisions, but without reference to gender. Relevant provisions in the Land Transport Standards and Guidelines include the following:

- *SA5.6: The driver must segregate livestock by sufficient internal partitions to minimise risk to the welfare of other livestock.*

Determination of segregation must consider all the following factors:

- (i) species, class and size*
- (ii) general health of the animals*
- (iii) level of aggression*
- (iv) nature of the intended journey.*

- *GA5.22: Mixing unfamiliar groups and aggressive livestock should be avoided, unless appropriately managed through handling and segregation arrangements.*
- *GA5.23: Livestock that are particularly susceptible to disease, stress or injury, or that are being transported for veterinary treatment, should be penned separately the vehicle, and either loaded last or first, to minimise any adverse welfare effects.*

We, in fact, prefer the language which already exists in ASEL, but in reference to Land Transport:

- *S2.10: When livestock are loaded for transport by land:*
 - a) animals of different species must not be mixed in a single pen;*
 - b) classes of animals of the same species must not be mixed;*
 - c) young animals must be separated from older animals;*
 - d) animals of a dissimilar size must be separated*

The use of the phrase “animals of a dissimilar size must be separated” is superior to the language proposed for Recommendation 17, namely, that “the standards require livestock to be penned for

air transport with the same weight ...”, since animals are never the same weight – in other words, Recommendation 17 is almost impossible to meet.

More importantly, the use of the term “immature” may be regarded as imprecise. More precise language would include a reference to secondary sexual characteristics – e.g. “unless not exhibiting secondary sexual characteristics”. Measurement of secondary sexual characteristics is well understood in the livestock industries. For example, for cattle secondary sexual characteristics involve³:

- Advanced development of muscles in the neck and shoulder region.
- A prominent penis stub and erector muscle.
- A well-developed scrotum with relatively scarce scrotal fat.
- Well-developed inguinal canal.

3.2 Rounding up

LiveCorp does not accept Recommendation 18 on the basis of a lack of justifying evidence:

- *Recommendation 18) That the current wording in 6.1.1 (2)(b) be changed to – “that 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.”*

Recommendation 18 represents a significant departure from current practice. Current practice is represented by the following statement:

“that when calculating the stocking density per pen, the number of livestock per pen may be rounded to the nearest whole number. n.5 (and below) must be rounded down.”

3.2.1 Change to rounding up provisions impacts on Australia’s international competitiveness

The change from n.5 to n.7 severely affects Australia’s international competitiveness, by significantly increasing costs for no proven welfare benefit.

Competition internationally for trade in livestock, especially breeder animals, is fierce. The major competitors in breeder cattle are Canada, the United States and countries in Europe all of whom have adopted the OIE/IATA standards and allow rounding up at n.5. For dairy goats the major competition is from Europe while for slaughter goats and sheep there is competition with sea transport or risk of losing some markets altogether.

The Committee appears to dismiss the threat to Australia’s international competitiveness and the cost impact, stating:

“The analysis showed that for cattle, there are several key weights which would result in significantly higher freight costs per head.

However, by selecting cattle at a slightly different weight, the impact could be avoided. For example, there would be no impact Exporters could be expected to change their selection requirements to mitigate the financial impact” (p29).

This statement does not reflect the realities of the procurement process. It assumes:

³ See AUSMeat, 2005, Handbook of Australian Meat, AUSMeat, South Brisbane, 111p.

- That in securing cattle for a particular consignment (with the consignment designed to meet a number of buyer specifications) exporters have available a very large number of cattle of different weights at competitive prices from which they can choose.
- Exporters are omniscient with respect to cattle weights.

The fact is that neither of these assumptions is borne out in practice. It is not enough to assert that economic costs from Recommendation 18 will be insignificant, as occurs on p29 of the *Draft Report*, it is important that the Review demonstrate that the statements on p29 are correct.

In the absence of such proof we rely on evidence contained in the LiveCorp submission to the *Issues Paper* and the Committee’s own statements that “*analysis showed that for cattle, there are several key weights which would result in significantly higher freight costs per head*”. Given the change will result in significantly higher costs, the Committee should demonstrate that the regulatory change proposed will result in significantly higher welfare outcomes.

Facts set out in Section 3.2.2 suggest that Recommendation 18 will not result in significantly higher welfare outcomes.

Our own calculations clearly demonstrate the impact on competitiveness and impact on costs from the TAC’s change to rounding provisions. Table 3.1 shows differences that exist between the number of head that can be placed in a pen with an internal area of 6.58sq metres (this pen size was taken from actual pen design measurements provided by an exporter) under the OIE/IATA standards and those calculated from the TAC recommendations.

Table 3.1: Number of head that can be placed in a pen with an internal area of 6.58 sq. metres under the IATA/OIE standards and TAC recommendations

Livestock weight	Number of animals in pen			% differences	
	OIE/IATA standards	TAC recommendations Upper hold	TAC recommendations Lower hold	Upper hold	Lower hold
Cattle 300 kg	8	8	7	0.0%	12.5%
Cattle 600 kg	5	4	4	20.0%	20.0%
Sheep 25 kg	39	39	35	0.0%	10.3%
Sheep 70 kg	18	18	16	0.0%	11.1%

Depending on the weight and type of livestock, in some cases the number of head that can be accommodated in a pen of are 6.58 sq. metres is the same under both the OIE/IATA standards and the TAC recommendations. In a majority of cases, however, differences exist, particularly for the lower hold (further discussion on the lower hold follows in Section 3.3).

If the Australian Government seeks different space allocations to those currently accepted internationally, then arguments should be presented to change the standards in international forums using readily available mechanisms. It is the view of LiveCorp that departure should only occur from well developed international standards if overwhelming evidence exists that the international standards are no longer best practice.

It is to be noted that the Australian Government is a signatory to the OIE standards, as are Australia’s international airlines to the IATA standards.

3.2.2 Welfare outcomes for air transport are already extremely high.

The Committee itself recognises that welfare outcomes for air transport are already extremely high. For example, on p5 the Committee note:

“Air transport is an important method of export for Australian livestock. It is regarded as offering higher animal welfare outcomes and is a much faster method of travel than sea transport”.

As pointed out in LiveCorp’s *Issues Paper* submission, for mortalities – the only measure of welfare consistently collected – air transport has a better record than all other modes of transport. For air transport during the last 3 years, across all species, more than a quarter of a million Australian animals have been exported by air and there have been just 66 mortalities, a rate of 0.03%.

Apart from mortalities, there are other reasons to conclude that welfare conditions for transport via air are superior to road or rail:

- Many rural roads are not paved and even tarred Australian rural roads are often rough. Livestock will inevitably be jolted on a regular basis. In comparison, flights are mostly smooth.
- During the Australian summer, extremely hot temperatures will be experienced when transport is via road or rail. In contrast, temperatures are controlled in an aircraft environment.

The above simply highlights that welfare conditions for livestock transported by air are excellent.

The Committee, however, is recommending further changes to the conditions of carriage (specifically, in the rounding up provisions), presumably to achieve even better outcomes. The ASEL Review should clearly articulate what improvements to welfare it expects to occur from the change in rounding up from n.5 to n.7 and how this will manifest in measurable outcomes.

The additional costs have been concluded above to be “significant”. In contrast, any improvements to welfare are likely to be marginal, since welfare is already so high for air transport of livestock. In the context of such a benefit / cost analysis, it is also pertinent to consider outcomes achieved by other modes of transport.

3.2.3 Loading too few livestock may result in greater risks than loading too many.

It is important to highlight that space allocations for livestock is an inexact science.

Livestock space allocation tables, including tables in ASEL, for a given weight specify a two-dimensional space allocation to be provided. However, the weight of livestock is distributed over three-dimensions. In specifying space in two-dimensions these tables effectively assume that:

- All animals referenced in a given table are very similar in shape.
- There is a perfect correlation between the weight of livestock and the two-dimensional space occupied by these livestock.

Neither of these assumptions will be totally validated in practice. Livestock, even of the same species and breed, come in different shapes and sizes. This is even more so when one considers that the space allocation tables are invariant (typically) across breeds. Tall, skinny animals occupy a different amount of two-dimensional space than do short, fat animals – this applies to humans as well as cattle, sheep and goats. A tall 450kg Holstein loads differently to a short 450kg Angus.

Loading livestock to appropriate densities is critical for air transport. Too few livestock in a pen can result in as many welfare issues as too many. In this respect, we noted in our previous submission that the OIE had observed: *“Animals confined in groups, especially in pens, should be stocked at a high enough density to prevent injuries at take-off, during turbulence and at landing”.* Goats and sheep in particular are “herding” animals and tend to move in close to each other in the crates. When they do this, mutual support, reinforced by the fixed support of the crate, can be lost if loading densities are too low.

Importantly, also, the space allocations under OIE and IATA are specified as recommendations, unlike other elements of the standards which are provided as requirements. This is similar to space allocations in the Australian Land Transport Standards which are provided as guidelines. Presumably this is in recognition that space allocation is an imprecise science and better outcomes may be achieved by providing some discretion to the operator.

A degree of flexibility in space allocations under the OIE/IATA standards is also evident in a range provided for minimum space allocations. The space allocation provided under the OIE/IATA standards can be calculated in a number of ways:

- a space allocation directly provided in the standards,
- 10 sq metres divided by the number of animals the standards specify as can occupy that space;
- The areas of various standard size pens divided by the maximum number of animals that the standards specify as can occupy those areas.

LiveCorp is unaware of any animal welfare issues relating to densities being too high in any air shipment. Given this, it is incumbent upon the Review to prove that changes to regulations are justified.

In summary:

- The current regulations are working well.
- In recommending an adjustment to the rounding up provisions from n.5 to n.7 the TAC is proposing that these regulations be changed.
- In making this recommendation the TAC should prove or, at the very least, supply strong supporting evidence, that the change will result in superior welfare outcomes.
- It must indicate which measurable elements of welfare will be improved.
- We do not believe that the TAC has done this.

3.3 10% penalty for the lower hold

The TAC in its *Draft Report* recommended the retention of the 10% additional space allocation in the lower hold.

In reaching this recommendation the TAC notes the following:

“The committee noted that ASEL requires, consistent with the IATA Regulations, additional space when livestock are loaded with mixed cargo in aircraft lower holds. The Hogan and Binns (2010) findings seem to apply only when there is no other cargo restricting airflow.

Additionally, the committee looked at a follow on study by Flynn, Wockner and Lott (2014) This study found, amongst other things, that the LATSA model, which was used in the Hogan and Binns (2010) study, under-estimated relative humidity and wet and dry bulb temperatures in the lower hold by about 7°C.

The committee concluded that when there are mixed cargoes in the lower hold, given there is an increased chance that airflow could be restricted by other cargo containers, that the additional 10 per cent space allowance should remain.”

LiveCorp does not disagree with this reasoning and recommendation. The reasoning is also reflected in the current ASEL provisions:

ASEL 6.1.1 (2) (j) When livestock are loaded with mixed cargo in aircraft lower holds, the pen area per head must be increased by 10%.

However, notwithstanding the ASEL provisions, members of LiveAir report that the 10% additional space allowance is **always stipulated by the regulator for the lower hold whether or not there is mixed cargo in the hold**. It is not uncommon for the entirety of the lower hold to be occupied by livestock – but the regulator still requires 10% additional space.

It is LiveCorp's view that where the lower hold is occupied by livestock, with no other cargo present, an additional space allowance is not justified. We believe from reading the *Draft Report* that the TAC has come to the same view.

- *LiveCorp proposal for an additional TAC recommendation: LiveCorp requests that where the lower hold only contains livestock, that the TAC makes it clear that no additional space is required.*

4 Fodder and water requirements

The *Draft Report* contained three recommendations on fodder and water requirements. These were:

- *Recommendation 19) That a management plan for water deprivation time during the air export journey be required for all livestock consignments by air. This plan should address the plan for the time livestock are off water and include water management arrangements during delays and transit stops, aimed at ensuring maximum water deprivation times are not exceeded.*
- *Recommendation 20) That the maximum water deprivation times reflect the Land Transport Standards and be adopted in ASEL for the air export journey, as detailed in Appendix D.*
- *Recommendation 21) The regulator should be required to assess the air export journey times proposed by the exporter to ensure they are realistic and that the maximum water deprivation time is not likely to be exceeded and have the ability to vary the plan if it considers the proposed times are not realistic.*

LiveCorp accepts all three recommendations.

5 Inspection of livestock

The *Draft Report* contained three recommendations on inspection of livestock:

- *Recommendation 22) The exporter must ensure a competent attendant can be present during transit stops (planned and unplanned) and unloading of livestock to oversee the welfare of the animals.*
- *Recommendation 23) That the standards require a competent attendant appointed by the exporter accompany consignments where the livestock are transported in a charter/freighter aircraft dedicated or substantially dedicated to livestock. The role of the attendant is to oversee the welfare of the livestock during flight, at transit stops and unloading.*
- *Recommendation 24) The department should work with the relevant organisation/s to review and improve the facilities available at airports for the unloading of livestock from land transport, inspection and loading into crates and loading onto the aircraft, to ensure they meet the standards expected to mitigate risks associated with work health and safety, and animal health and welfare.*

LiveCorp accepts recommendation 24, but suggests some changes to Recommendations 22 and 23. In relation to Recommendation 24, LiveCorp notes comments in the *Draft Report* on facilities at Melbourne airport and looks forward to the Department's work in this area.

5.1 Comments on Recommendation 22

LiveCorp proposes that Recommendations 22 be re-worded as follows:

- *Recommendation 22) The exporter must ensure a competent attendant is present during planned transit stops and unloading of livestock to oversee the welfare of the animals.*

Two implications flow from the proposed wording change to Recommendation 22.

First, the original wording was that a competent attendant “*can be*” present during transit stops. “*Can be*” implies a *theoretical capability* to be present during transit stops, but not the *necessity* to be present. The wording of Recommendation 22 has been simplified to place an onus on the exporter to ensure a competent attendant is present during planned transit stops.

Second, Recommendation 22 as currently worded, by referring to both planned and *unplanned* transit stops, would effectively require a competent attendant to accompany all livestock consignments by air whether by charter or passenger aircraft (since an aircraft can be diverted anywhere for an unplanned transit stop). The rewording removes the reference to unplanned transit stops.

The removal of reference to unplanned transit has been made for three reasons:

- Requiring a competent attendant to be present during unplanned transit stops is impractical and is unlikely to result in improved welfare. As highlighted in our original submission, an attendant on a passenger aircraft certainly would not have access to livestock during flight. Furthermore, a competent attendant may well not have access at unplanned transit stops – since necessary security clearances almost certainly would not exist.
- The major risk of unplanned transit stops is with charter aircraft, since the majority of livestock are freighted using this method. We have suggested tightening the wording of Recommendation 23 in relation to competent attendants on charter aircraft (see Section 5.2).

- A superior method of addressing unplanned transit stops is through an appropriate contingency plan. This has been addressed in Recommendation 27:
Recommendation 27) That the standards require a contingency plan for the management of livestock in the event the aircraft is diverted and forced to land at a location different from the intended transit stop/s or destination.

5.2 Comments on Recommendation 23

LiveCorp proposes that Recommendations 23 be re-worded as follows:

- *Recommendation 23) That the standards require a competent attendant appointed by the exporter accompany consignments where the livestock are transported in a charter/freighter aircraft. The role of the attendant is to oversee the welfare of the livestock during flight, at transit stops and unloading.*

Again this represents a simplification and broadening from the original recommendation.

The original wording stated that a competent attendant would only be required on charter aircraft where the charter was “*dedicated or substantially dedicated to livestock*”. We believe that this wording:

- Is ambiguous – the measure of “substantially dedicated” is unclear.
- Will result in inequities between exporters and potential “gaming” of the provisions.

After extensive consultations with LiveAir, LiveCorp believes it is simpler and more equitable to remove the words “*dedicated or substantially dedicated to livestock*” from Recommendation 23. LiveCorp concedes that the removal of these words potentially creates additional inequities between small consignments by passenger aircraft (where a competent attendant would not be required) and by charter aircraft (where a competent attendant would be required). However, after detailed discussions with LiveAir exporters and information obtained on shipments by charter and passenger aircraft we believe the more general provision proposed by LiveCorp is more equitable.

6 Reporting requirements

The TAC in its *Draft Report* made two recommendations with respect to reporting requirements:

- *Recommendation 25) That the reportable level for mortalities for sheep, goats, camelids and deer should be set at 1 per cent, or three animals, whichever is greater.*
- *Recommendation 26) That the reportable level for mortalities for cattle and buffalo should be set at 0.5 per cent, or three animals, whichever is greater.*

As noted in LiveCorp's submission to the *Issues Paper*, Recommendations 25 and 26 are supported on the basis of consistency with the TAC's recommendations for sea transport of livestock.

7 Contingency planning and reporting requirements

The Committee in the *Draft Report* made four recommendations relating to contingency planning and reporting requirements:

- *Recommendation 27) That the standards require a contingency plan for the management of livestock in the event the aircraft is diverted and forced to land at a location different from the intended transit stop/s or destination.*
- *Recommendation 28) That the standards require a contingency plan for euthanasia for any animal where it is deemed as required either on-board the aircraft if livestock are accessible and it is safe to do so, or as soon as possible after unloading from the aircraft.*
- *Recommendation 29) That the requirements for the end of journey report be updated as per Appendix E of this report to include more detailed animal welfare monitoring and to cover more aspects of the air export journey.*
- *Recommendation 30) That the standards include a notifiable incident if the maximum water deprivation time is exceeded. If maximum water deprivation times are exceeded, exporters should notify the department as soon as possible. The report should include details of any mitigating measures that have been employed to address the issue.*

LiveCorp either unconditionally or conditionally accepts all four recommendations.

Recommendations 27 and 28 are accepted without qualification.

7.1 Collection of additional data

In terms of Recommendation 29, the addition to regulatory burden which will flow from the increased reporting requirements recommended by the TAC can only be justified if the information is used. In this regard LiveCorp notes the following:

- The current end of journey report is already very comprehensive with information included in this report on the flight (e.g. airline, aircraft type, flight number, departure airport / date, dispatch airport / date, flight conditions, transit stops); conditions under which the animals were kept and handled; and welfare outcomes (e.g. health and welfare of livestock, number of livestock born during the journey, number of abortions, number of mortalities).
- The considerable effort of exporters in collecting and compiling the data has not been matched by efforts to use the data – even though these efforts would be minor compared to those allocated by exporters in data collection and compilation. The vast majority of data collected and compiled by exporters (as required) is not, to our knowledge, made accessible, used or referenced. Given this, the benefit / cost ratio of the regulation is likely to be extremely low.

It is the view of LiveCorp that if regulations are to be adjusted to require the collection of further information, the Review should make an additional recommendation: that any data collected be made accessible by the Department in a form that does not identify individual exporters but allows the performance of the trade to be monitored across the range of data collected.

7.2 Exceeding maximum water deprivation times to be included as a notifiable incident

It is the view of LiveCorp that notifiable incidents should be reserved for events that are of an extremely serious nature and that warrant a thorough investigation.

It is not clear from the TAC's own views that exceeding maximum water deprivation times fall into this category.

Although maximum water deprivation times have been set at 48 hours for adult cattle, sheep and goats, the TAC cite strong evidence that deprivation for longer periods is of little concern clinically. For example, the TAC notes on p31 of the *Draft Report* that:

“Some studies have shown that cattle deprived of food and water up to 48 hours have shown some signs of dehydration However, in these studies the level of dehydration even after 48 hours could not be classed as being of clinical concern

Ferguson and Fisher (2008) concluded that current maximum transport duration, which is based on the maximum period of water deprivation (48 hours), within the welfare codes for cattle and sheep are acceptable on animal welfare grounds for the class of stock examined and the experimental conditions that prevailed.

Parker et al (2003b) indicated that sheep may also be reasonably tolerant of considerable periods of water deprivation, with indications only appearing after 72 hours of water deprivation. The literature review also reported on the interaction between water deprivation and the environment, with animals subjected to hot and humid conditions”.

We note that “*hot and humid conditions*” do not typify the environment within an aircraft hold.

Given the above statements, justification is needed on why exceeding 48 hours represents a notifiable incident. This does not imply that exceeding maximum water deprivation times should not be reported and, if it happens by the same exporter more than on very rare occasions, warrants investigation.

More generally, it is our view that investigations would be of greater use if the focus was on an exporter's total performance over time – as envisaged within the Approved Arrangements structure – and not on isolated incidents, except when these were of an extreme nature (and we do not believe, based on the TAC's own evidence, that exceeding the 48 hours by minutes or even an hour or so falls into this category).

Finally, we draw the attention of the TAC that the current definition of notifiable incident includes any incident that has an adverse effect on animal health and welfare whether ‘serious’ or not - see clause 6.5(e). This provision, taken literally, would require notification of an animal knocking its leg on unloading since this may cause minor bruising.

We recommend that the word ‘serious’ be inserted into clause 6.5(e).

8 General

Under the chapter titled 'General' the TAC make two recommendations:

- *Recommendation 31) That the standards include a provision that the IATA Regulations, as amended and in force from time to time, shall apply to the export of livestock by air from Australia, unless conflicting with the ASEL, in which case the ASEL should apply.*
- *Recommendation 32) That the department releases an Export Advisory Notice when the IATA Regulations are amended.*

Both recommendations are accepted by LiveCorp.