

19 October 2018



Technical Advisory Committee for the Heat Stress Risk Assessment (Live Animal Exports)
Department of Agriculture and Water Resources
GPO Box 858
CANBERRA ACT 2601

Dear Committee,

Review of the Heat Stress Risk Assessment (HSRA) in Australian Live Export

Thank you for the opportunity to provide a submission into the review of Heat Stress Risk Assessment (HSRA), in relation to live animal exports from Australia. Sheep Producers Australia (SPA) is the peak industry organisation for sheep and lamb producers. It works to enhance the industry's productivity, profitability and sustainability. SPA appreciates this review is part of a much larger process, examining all the regulations and standards, under which the live export trade (particularly for sheep) operates. In this submission there is a small amount of overlap to information provided by SPA as part of the ASEL Review submission (Stage 1 and Stage 2).

In keeping with the approach taken with previous, SPA encourages a common-sense approach to the issues raised in the Discussion Paper, with the major focus to be on the science that determines the conditions under which live export shipments can be approved.

As with previous submissions, there are technical areas that are undergoing more research or are best answered by other stakeholders, that will not be addressed in this submission. SPA continues to be supportive of the research undertaken by Livecorp, which has been partly funded by sheep industry levies.

SPA would address the specific issues raised in the paper as follows:

1. Mortality limit and heat stress threshold

It is natural at first brush, to want to distance the discussion from mortality as it can appear to be an overly blunt measure of performance and because, like others in the supply chain, sheep producers would naturally want to see efforts to achieve the lowest mortalities possible on any voyage. However, this tendency may not lead to the best outcomes when the role and limitations of a predictive model within the regulatory and industry frameworks are considered.

The current predictive model, by incorporating the available science and reasonable assumptions based on considerable expertise, provides an accurate regulatory and industry management model built around mortality probabilities for heat stress. This use of heat related mortality is sensible as it is a (the only) clearly defined, unambiguous and certain basis on which to set the probability for the model and from this it has been able to incorporate a surprising level of detail (e.g. by class, acclimation, coat type / length, body



condition etc). By contrast, moving from mortality to a heat stress or welfare threshold means introducing a much greater degree of uncertainty, variation and subjectivity at all levels of the model – creating real challenges and concerns for the continued value and accuracy of the HSRA as a regulatory tool. As the predictive assessment is a precursor to the ability to export, it is vital that the HSRA meets good regulatory principles and provides consistency, clarity and to achieve this it is critical that the model is based on objective, clearly defined and identifiable measures. SPA believes that the trade currently has a model that is well designed and provides a scientifically rigorous basis for determining the risk of a particular shipment prior to export for regulatory purposes. As a result, SPA believes that to reduce the chances of both incurring mortalities, and unacceptable animal suffering, it is a matter of changing the assumptions (or acceptable mortality probabilities), and continuing to use the very accurate predictive model that already exists. A refined model that continues to use mortality provides the most certain and accurate means of regulating the industry and contributing to risk management of welfare.

In saying the above, sheep producers encourage the continued concurrent focus on welfare measures / indicators by the livestock export industry at the management level. Sheep producers are strongly engaged in the increased discussion and science into measuring non-mortality animal welfare indicators (sheep producers are involved, through MLA, in both welfare indicator development for on-farm and in live export) to support the continued development of industry systems to maintain welfare at the highest level possible.

In this regard, we note that - in examining how HSRA is currently conducted, and examining how this could change in the future – the Discussion Paper does not mention, or allow for the delineation between the HSRA before the shipment departs, and the on-going management of the shipment. The delineation is important, as the parameters around the probability of mortalities on a voyage provide a very definable factor to provide what is acknowledged by interested third parties as an accurate predictive model of voyage outcomes. Conversely, welfare measures are much more variable and less capable of providing a reliable regulatory predictor – instead they should form the basis of industry management plans, monitoring and responses.

2. Probability setting in the HSRA model

SPA is supportive of the current methods used to provide a HSRA, with the acceptable probabilities to be a 2 % chance of a 2 % mortality. The best animal welfare outcomes will occur from the use of as accurate and certain a model as possible in regulatory and industry decision making. At present the current method is by far the most accurate and significant changes to the basic probabilities (i.e. moving away from the certainty / objectiveness of mortality) risk its accuracy and value. SPA believes that to gain the better industry outcomes means changing the acceptable probabilities that are placed in this model, and industry working to develop and implement concurrent animal welfare measurement, monitoring and response.

3. Animal Welfare Indicators

The above analysis, does not preclude animal welfare factors from playing an increasing role in improving the management of this trade, SPA is supportive of the research by Livecorp into the best use of a growing database of animal welfare indicators and their recording throughout a voyage.



The 'App' that Livecorp are developing for use on vessels in collecting data will obviously assist in improving the knowledge of how indicators change throughout a voyage and how stress factors can be mitigated. SPA acknowledges that the 'panting score' and 'respiratory rates' are likely effective indicators of animal welfare, specifically for heat stress. They are however factors that still require some training to be able to monitor, science to interpret, and require significant resources or new technologies to properly and meaningfully monitor across the different sections of a vessel, at regular intervals. When added to the 'Appearance' or 'Demeanour' of the animal, it does introduce a level of subjectivity to the observations.

SPA notes that panting and elevated respiratory rates do occur on-farm, particularly when handling animals in the summer months. Common sense is used to limit movements in the hottest part of the day, and to reduce the time where animals are panting, especially at the higher levels described in the paper.

SPA encourages the increased monitoring of animal welfare indicators as described in the Livecorp trials of their 'App', to assist in the management of the livestock during the voyage. At this stage, however, more research is required as to how and whether these factors can reliably be used as part of the HSRA itself in its regulatory purpose.

4. HSRA Setting and Heat Load

SPA will leave the technical aspects of detecting heat load in sheep to any research that can be provided by Livecorp. One factor that SPA views as a gap in current considerations, is the minimum temperatures expected on any given voyage. Rightly consideration is given to maximum temperatures expected, and how these can affect Heat Stress levels.

Sheep producers are aware that sheep have the ability to greatly reduce their heat load if the minimum temperatures during any period are low enough to allow. A greater daily variation in temperature may allow the sheep to 'dump' their heat loads, and affect the length of time any Heat Stress is experienced by the animal. SPA encourages research into this area, to examine if variations in temperature should be included in future HSRA modelling.

5. Allometric stocking densities

This issue was part of the ASEL Review, and formed part of the response from SPA (for Stage 2). SPA is supportive of space allowance that allows all livestock in a pen to simultaneously lie down. The advice presented to SPA by ALEC has identified that the relevant allometric for all livestock to lie simultaneously is calculated by k-value of 0.027. SPA supports the use of this value in calculating stocking densities and notes that it should apply across the year regardless, with the only case where this should be disregarded, being when the Heat Stress Risk Assessment (HSRA) for a voyage determines that more space is required for each animal. For extended long haul voyages, an additional space allowance of 10% is recommended.



Background

Sheep Producers Australia (SPA) represents sheep and lamb producers in Australia and provides a mechanism to bring a diverse range of issues and needs to the policy making process. SPA draws on many formal and informal processes to achieve this. Principal amongst these is input from the state farming organisations, which have extensive networks within their jurisdictions.

As the recognised peak body for the sheepmeat industry under the *Australian Meat and Livestock Industry Act 1997* (the Act), SPA sets the strategic objectives to be pursued by the levy funded organisations Meat and Livestock Australia (MLA), Animal Health Australia (AHA), and the National Residue Survey (NRS), examining and approving their programs and budgets. We are involved in priority setting for industry research and development and marketing activities both domestically and internationally as set out in the Red Meat Memorandum of Understanding (MoU). Under the MoU, SPA assesses the performance of services delivered by expenditure of lamb and sheep levies.

The objects of SPA are;

- to represent and promote the interests of Australian sheep and lamb producers;
- to carry out activities necessary for the advancement of the sheepmeat and live sheep export industries;
- to collect and disseminate information concerning the sheepmeat and live sheep export industries;
- to co-operate with industry stakeholders and organisations at the state and national level and overseas;
- to maintain interaction and co-operation with its Members, relevant Government departments and authorities at Federal, State, and local government levels, and with other relevant industry organisations;
- to promote the development and resourcing of the agricultural and pastoral industries of Australia;
- to act as the Prescribed Body for the sheepmeat industry in Australia within the Red Meat Industry MoU under the Act;
- to oversee the implementation of the Sheepmeat Industry Strategic Plan (SISP).

Yours sincerely,

Graham Smith
Chief Executive Officer