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1 March 2019

Technical Reference Panel  
Department of Agriculture and Water Resources  
GPO Box 858  
CANBERRA ACT 2601  
DAWR "Have Your Say" online portal

Dear Technical Reference Panel,

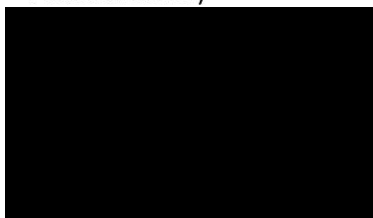
**Re: Draft report of the Heat stress risk assessment for the export of sheep to the Middle East**

AgForce appreciates the opportunity to provide feedback to the Technical Reference Panel (TRP) on their draft recommendations for the Heat Stress Risk Assessment (HSRA), published December 2018.

AgForce Queensland Farmers is the peak rural group representing the majority of beef, sheep & wool and grain producers in Queensland. The broadacre beef, sheep and grains industries in Queensland generated around \$7.2 billion in gross farm-gate value of production in 2016/17. AgForce exists to facilitate the long-term growth, viability, competitiveness and profitability of these industries. Our members provide high-quality food and fibre products to Australian and overseas consumers, manage around 40% of the Queensland agricultural landscape and contribute significantly to the social fabric of rural and remote communities.



Yours Sincerely



AgForce Queensland Farmers



**Date: 1 March 2019**

## **AgForce Submission**

**Technical Reference Panel - Heat Stress Risk Assessment Recommendations**

This submission references the significant body of work completed by industry's Peak Bodies, whom engaged the services of a Technical Advisory Group (TAG)<sup>1</sup> with expertise in animal and veterinary sciences, including livestock heat stress, thermal stress models and live export; and acknowledges the comprehensive submissions completed by Sheep Producers Australia, the Australian Live Export Council and LiveCorp.

AgForce specific response to the Technical Reference Panel (TRP)'s recommendations are contained in Attachment A.

In summary, AgForce supports the continuation of a sustainable live sheep export industry that is accountable and delivers positive animal welfare outcomes. The live sheep export trade is critical to the livelihoods of many Australian farmers and regional communities. It makes a significant contribution to the broader Australian economy (\$259 million in 2017-18<sup>2</sup>). Additionally, Australia is well-recognised as a leader in the global live export industry and has spent millions of dollars on low-stress livestock handling training and building infrastructure within the countries of our export markets, demonstrating our demand for high animal welfare outcomes, whilst protecting the whole supply chain.

AgForce does not support the Report's recommendation of a simplistic set 28°C Wet Bulb Temperature (WBT) limit; noting that this recommendation would have consequences for all livestock production systems in Australia. The duration of the heat event, time in recovery, ventilation and access to water are all important contextual factors which are not accommodated in the 28°C WBT measure as presented in the recommendations of the Report.

As the TRF's recommendation for a single arbitrary measure, WBT lacks extensive on-board verification and relies on the results obtained from a narrowly constructed experiment. While this may provide a convenient regulatory outcome, it does not take into consideration the complexity of animal welfare indicators' cumulative effect of different measures.

Other factors that are relevant to addressing hot climatic conditions include:

- Careful selection of livestock - although HSRA includes some selection criteria, there are many other livestock factors that can influence results. The time spent in registered premises, preparing and adapting livestock for the journey, is also vitally important.
- Using the first few days of a voyage preparing for the prospect of hotter weather - it is better to prepare before it gets hot rather than when it is already hot.
- Evening out stocking densities and opening up pen areas so that the stock have good access to watering points and ventilation outlets (areas around exhaust fans will be hotter and more humid than areas around supply fans).
- Making sure water troughs are well maintained, preventing any leaks that will increase humidity and affect the manure pad. Making sure that the troughs are filling to an appropriate level: not too high, or the troughs will spill with sea swell, and not too low that stock cannot get a good drink.

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<sup>1</sup> A list of the TAG members is provided at Attachment B to this submission.

<sup>2</sup> ABARES, Australian Bureau of Statistics, Information Consultancy Services, 2007, cat. no. 9920.0, Canberra

- Maximising ventilation and airflow wherever possible, opening those hatches or doors that will improve airflow. If any 'black spots' are identified make use of auxiliary fans, if possible. On ships with open decks, move and stack all the loading infrastructure or any solid panels so air flow is unobstructed; and proceed in a zig-zag fashion to take advantage of cross winds.
- Progressively obtaining weather forecasts for upcoming days and if hot weather is forecast, put in place mitigation steps such as:
  - Undertaking any deck washing before hot weather arrives in order to limit humidity.
  - Possibly adjusting feeding, reducing the pellet component and increasing chaff – as pellets give off more heat when fermenting in the rumen than chaff.
  - Minimising the disturbance of the livestock when the temperatures peak, minimising stock movements and activities on decks.
  - Making sure there is access to clean fresh water for all sheep.

AgForce supports the move towards assessing on-board welfare outcomes generally, rather than mainly relying on mortality; where, outside of clear areas of heat-stress-induced death or permanent impairment, value judgements are involved in welfare decisions.

Changing the focus of the HSRA model to one that incorporates dimensions of animal welfare other than mortalities will take time and further research, given it necessarily involves building in concepts such as risk, duration and respite. A multi-factor index approach is likely more suited to the management of actual conditions.

LiveCorp are currently investigating options and AgForce is very supportive of further investigations into measures which improve animal welfare. For HSRA regulation to be effective it should be outcome focused, achievable and applicable to all circumstances.

Whilst AgForce believes that the use of a WBT measurement has a role to play in animal welfare standards, applying a WBT limit of 28°C alone is unrealistic and impractical and would impose unwarranted restrictions on the trade, rendering the trade unviable. Justifiably, the TAG concluded that the 98<sup>th</sup> percentile WBT upper limit used in the model may be neither consistent with the science available, nor provide the desired welfare outcomes; and similarly, the McCarthy Review recognised that only two per cent of the available research in this area has been considered.

The TAG has subsequently made a number of suggestions to ensure that sheep are unlikely to experience poor welfare due to heat stress on ships<sup>3</sup>; and, over the last ten (10) months, industry has worked cooperatively with the government to implement measures to improve performance, these measures being:

- Independent Observers are now in place for every voyage carrying both sheep and cattle, and report back daily to the independent regulator (the Department of Agriculture and Water Resources). Importantly, the reports of these Independent Observers also represent a valuable scientific resource – access to on-board environmental and welfare data, measured concurrently. This Independent Observer data should be used to verify and improve model predictions.

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<sup>3</sup> Refer to the submission completed by Sheep Producers Australia.

- Stocking densities have been significantly reduced, in line with the recommendations of the McCarthy Review. During the summer trade sheep have up to 39 per cent more space and overall densities are reduced by 28 per cent.
- Industry has imposed a voluntary moratorium on live sheep shipments to the Middle East during the hottest months of the Northern Hemisphere summer (June, July and August).

It must be recognised that due to the massive complexities of developing and using scientifically-rigorous animal welfare indicators across a range of animal types on-board ships of varying structures, time is needed to test and implement suggested methodologies appropriately; and that industry is moving through a rapid transition of change and must be allowed to adjust and monitor these systems before any further regulatory changes are placed on industry.

Independent Observers data could further enhance the development of a more complete image of animal welfare considerations in transit. ALEC recommends an assessment of panting score is necessary to add context to the welfare indicator. Sheep can pant comfortably for long periods of time and the Independent Observers reports could be utilised to determine when panting becomes a real concern.

AgForce seeks to progress an innovative and proactive regulatory solution for the industry managing heat stress on voyages to and through the Middle East, considering the available science, best management practices and practical observations.

AgForce therefore requests that the current live export regulations remain in place for 2019, particularly during the shoulder months of May and September, to ensure further research, data collection and analysis on the HSRA model can be completed. This includes maintaining a 17.5 per cent reduction in the stocking density required by the Australian Standards for the Export of Livestock (ASEL) for sheep consignments to the Middle East and independent auditing of vessel pen air turnover readings to confirm the data entered into the industry heat stress risk assessment model is accurate.

While the HSRA report is focused on the live export of sheep, there are broader implications that need to be carefully considered before pursuing any new regulatory measures. The cattle trade to the Middle East and any movement over the equator will be impacted by these recommendations. Currently the Hot Stuff model effectively manages risk of heat stress impacting cattle transport. The model is constantly updated to incorporate new data including improved accuracy of climactic risks through water temperature satellite data.

Industry has already implemented a voluntary moratorium on sheep shipments during June, July and August and remains committed to this. Industry is also committed to investing in further improvements through an ongoing program of research and development. Given these improvements, and to ensure the HSRA remains an effective regulatory tool capable of producing consistent results, AgForce recommends no changes be adopted until they are supported by clear, scientific evidence.

## **Attachment A**

### **Recommendation 1**

AgForce supports the move to a more nuanced assessment of animal welfare that takes into consideration the complexities of heat stress, duration and respite and achieves a workable set of criteria for the assessment of welfare.

The SPA, ALEC and LiveCorp submissions contain suggestions on ways to provide for the complexity associated with animal welfare measures. These require further investigation and consideration. AgForce recommends further research and practical on-board testing of the proposed recommendations before they are adopted into regulation.

### **Recommendation 2 and 3**

AgForce does not support the Report's recommendation of a simplistic set 28°C Wet Bulb Temperature (WBT) limit; noting that this recommendation would have consequences for all livestock production systems in Australia.

### **Recommendation 4**

AgForce accepts this recommendation with the provisos listed in comments on Recommendation 1.

### **Recommendation 5**

AgForce supports continuous improvement in animal welfare standards and believes the full range of animal welfare indicators has not been developed or incorporated into HSRA. While research is still underway, HSRA should not be locked into regulation until real world testing is completed first. HSRA may require redesign if other factors are taken into consideration and are backed up by science.

### **Recommendation 7**

AgForce supports this recommendation, the current understanding of the impact of environmental heat on animal welfare is very poor and more data is needed. ALEC submission points out there is a great deal of data that is recorded but not made available to industry to utilise.

### **Recommendation 8**

AgForce agrees with this recommendation. A more holistic approach is needed to address the issues of heat stress on animal welfare.

## **Attachment B – Technical Advisory Group membership**

Professor Bruce Allworth,  
Director, Fred Morley Centre | Professor in Livestock Systems  
School of Animal and Veterinary Sciences | Charles Sturt University

Associate Professor John Gaughan  
School of Agriculture and Food Sciences  
The University of Queensland

Dr Robin Jacob  
Department of Agriculture and Food (WA) – Livestock Innovation

Steve Meerwald  
Chief Executive Officer  
Harmony Agriculture and Food Company Pty Ltd

Sue Middleton  
Executive Director, Brennan Rural Group  
2010 Rural Woman of the Year