28th February 2019

Technical Reference Panel
Heat Stress Risk Assessment Review
Department of Agriculture and Water Resources
GPO Box 858
Canberra ACT 2601


The PGA is a non-profit industry organisation established in 1907, which represents primary producers in both the pastoral and agricultural regions of Western Australia.

As a state farming organization, the PGA supports its membership in the operation of profitable farm businesses.

As the representative body for livestock producers who supply the majority of sheep to the live export trade we are very concerned as to the implications of changes to a model that serves as a risk management tool to reduce stocking density during the northern hemisphere summer, that may feed back to on-farm management practices and farm profitability.

The PGA supports the export of livestock to other sovereign nations for feeder or breeder purposes.

The PGA provides this support because:

- Western Australia is the major supplier of sheep for the live export trade. The Western Australian sheep industry dominates the live export trade out of Australia, averaging nearly 85% of the total annual flows out of the country each season over the last five years. [For farms selling sheep, live exports accounted for a larger share of sheep and lamb receipts in Western Australia (48 per cent) than in the other states (around 30 per cent). Source - Live export trade assessment - Report to client prepared for the Live Animal Exports Reform taskforce, Department of Agriculture July 2014 by ABARES].

- Across specialist and mixed farms, livestock sales have been historically equally as important as wool revenue. Therefore, having access to a

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number of different markets will continue to provide significant option value given variation in seasonal conditions and markets. Live export provides buying competition in the marketplace for Western Australian sheep.

- Almost all Western Australian sheep have to travel to the Middle East or through the Middle East.

In 2017, Kuwait accounted for 34% ($71.7 million) of the value of live sheep exported from Western Australia; Qatar remained the second largest market share with 33%; exports to Turkey were worth $16.3 million. The fourth largest market was Oman accounting for 8% of live sheep exports.

In particular, live export is a very useful risk management tool for Western Australian sheep farmers.

Western Australia has a Mediterranean climate that favours dryland farming practices. Pasture growth is dependent on winter rainfall events, which may start late or finish early, depending on seasonal conditions.

The ability of Western Australian sheep farmers to turn off sheep to service the northern hemisphere Middle East live export market can be essential to good animal welfare, pasture management, and maintaining on-farm profitability.

Further, the Farmer Review of 2011 did note some welfare issues with cattle, including heat stress. Consequently, the PGA is concerned that the results of this HSRA draft report will eventually flow onto and restrict that trade as well.

The live cattle export trade is particularly important to cattle producers in the north-west of Western Australia, whose entire production systems are almost entirely directed towards the live export trade.

The PGA believes that the HSRA model is not well understood by the wider livestock industry, including those exporters who use it.

It is currently a risk management tool.

Altering the settings from a predictor of mortality to a predictor of discomfort will fundamentally change the nature of the tool.

It will no longer operate as a risk management tool that allows live export voyages to proceed with consequential destocking to compensate for predicted weather conditions.

It will now operate as a go/no go tool, with decisions made before departure that will in effect prevent a live export voyage from even leaving port.

It seems difficult to imagine at this juncture how live export shipments could even be assembled under a new heat stress regime, considering that it is a major logistic exercise that uses the principles of “just-in-time” aggregation.

According to the Department of Agriculture and Water Resources (What Do The Heat Stress Risk Assessment Review Recommendations Mean?) “Comparison with analysis undertaken during the McCarthy review suggests live Merino sheep
exports from Australia during the hottest months of the year in the northern hemisphere (May to October) may not meet the WBT animal welfare criterion”. This is 6 months of the year.

However, the Figure (chart) on page 4 of this document makes it clear that actually the threshold of 28 degrees wet bulb temperature (WBT) will be exceeded for 7 months (includes April).

The chart also shows that the months of March and November are above 27 degrees WBT, and depending on seasonal conditions, may exceed the 28 degrees WBT threshold.

It is also important to note that the threshold limits for a 56kg Merino adult (body condition score 3, shorn) does in fact represent the typical Western Australian shipping sheep (The most frequently shipped sheep are 50 – 60 kg live weight wethers up to and including 4 years old. Source – The value of live sheep exports from Western Australia - A review of adjustments that would be required if live sheep exports from WA ceased - Prepared for RSPCA Australia March 2009 by ACIL Tasman).

It is possible that under such a heat stress regime, the model will prevent the live export of sheep from Western Australia for up to 9 months of the year.

Under such circumstances it may be entirely possible that such a lengthy pause in the live export trade to the Middle East will vacate the market, forcing importers to source sheep from other countries. Loss of market share could result in complete loss of the market.

For example, Saudi Arabia was one of Western Australia’s largest markets (although quite volatile) for live sheep exports, importing over a million sheep in some years. With the introduction of the Exporter Supply Chain Assurance System (ESCAS) in 2012, Saudi Arabia ceased importing live sheep from Australia as they believed it impacted their sovereignty due to Australian oversight in Saudi abattoirs.

It is also important that the Technical Reference Panel understands what the ramifications of altering the risk settings in the HSRA model may be.

It certainly seems likely that having set a 28 degree WBT for the welfare of animals on the high seas, that animal rights activists will use this as validation to campaign on heat stress remediation arrangements in domestic abattoir lairage, saleyards, feed lots, transport, shedded sheep and possibly even on livestock farms.

The practicality of such arrangements is indeterminate.

The PGA notes that the HSRA draft report is a product of further inquiry into recommendations 3–5, 7 and 8 of the McCarthy Review.

However, the McCarthy Review was a direct response to the release of footage around a high sheep mortality voyage to the Middle East in 2017, leading to condemnation by activists of the live export trade.
The McCarthy Review was in effect the Commonwealth Government’s risk management tool.

The PGA is of the belief that the McCarthy Review was meant to provide a road map of long term goals that would be informed and achieved by on-going research.

As such it provided short term workarounds while near term solutions were worked out.

It is important to note that the live export industry has been subjected to up six public consultations, an internal government review and an internal ‘whistle blower’ investigation.

Some time needs to be given to the live export industry to assimilate the findings of these various reports and to allow its service delivery organisations to research and determine how best to proceed.

For example, according to LiveCorp, over 70 indicators of animal welfare in the live export supply chain are being trialled through its joint MLA Live Export Program research and development. It is possible that a better indicator of animal welfare than both mortality and WBT will be found.

As the Technical Reference Panel will know, the PGA did not make an initial submission when the HSRA Issues Paper was released.

This was because, at the time, all the PGA knew about the HSRA model came from a handful of screen shots of the data entry fields. In no way was the PGA able to make a sensible comment on the model because of this lack of understanding of how the model worked.

In fact the PGA was more concerned that space allocation (stocking density) on-board ships on an allometric basis would result in decreases in stock numbers loaded that would make live export voyages un-economic.

Without wishing to re-state the obvious, the PGA believes that regulatory arrangements based on the HSRA model have the potential to effectively inhibit the live export trade such that it will become uneconomic to participate in.

If that becomes the case, then there will be economic implications for Western Australia’s regional and rural communities.

According to the live export trade assessment prepared for the Live Animal Exports Reform taskforce, Department of Agriculture in July 2014 by ABARES, 1773 farmers in Western Australia derive an income from the live export of sheep, and 2025 FTE employees are directly employed on farm producing sheep for live export.

Besides these farmers selling their livestock for export, other businesses derive an income from this trade, including on-farm contractors, road transporters, suppliers of hay/fodder to export yards and cattle ships, freight companies, veterinary and feedlot service providers and fuel suppliers.
It is estimated that a further 2078 people are indirectly employed in these supporting businesses.

It is important that the Technical Reference Panel understands that not all farmers are in the financial position to be able to readjust their farm business model if it is not able to continue supply livestock to the live export trade.

Similarly, not all farm workers, or truck drivers, or stock hands have the portable qualifications to find alternative employment if they cannot continue to find work with farmers who supply livestock to the live export trade.

In reacting to Consignment 69. Sheep exported by sea to Qatar, Kuwait and United Arab Emirates in August 2017 where the cause of this reportable mortality was heat stress, the Commonwealth Government has reacted to a special cause variation.

It now seeks to regulate all live sheep export voyages according to a special cause, without placing this unfortunate episode into overall context.

The PGA notes that according to historic MLA research over the last 15-20 years, inanition and salmonellosis have been considered the most important causes of death in exported sheep, with deaths due to the persistent inappetence-salmonellosis-inanition complex (PSI) mostly occurring during the shipment phase of the export process.

In conclusion, the PGA notes that duration of exposure, and respite, is an important dynamic in the development of heat stress.

It is important that the risk is not simply being compared to a wet bulb temperature.

Yours Faithfully

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