



Proposals and Conditions for Live Sheep Exports during the Northern Hemisphere Summer

Submission from the
Australian Veterinary Association Ltd



The Australian Veterinary Association response to: *Proposals and Conditions for Live Sheep Exports during the Northern Hemisphere Summer*

The AVA supports conditions as outlined in **Part 1** of Attachment A: *Proposals and Conditions for Live Sheep Exports during the Northern Hemisphere Summer*

The AVA would expect any exemptions granted under section (j) to be made publicly available, with an associated risk assessment and rationale for the decision.

The AVA generally supports conditions (a) and (b) in **Part 2** of this document. The AVA understands that the conditions outlined are interim arrangements until finalisation of the HSRA review.

Comment on 2(a): collection of WBT data

The AVA supports this requirement, but stresses that WBT must be recorded in a range of locations on each deck and continuously throughout the day in order to capture accurate WBT information.

Comment on 2(c): arrangements for June to August

In previous submissions, the AVA has stated:

Irrespective of stocking density, thermoregulatory physiology indicates that sheep on live export voyages to the Middle East during May to October will remain susceptible to heat stress and die due to the expected extreme climatic conditions during this time. Accordingly, voyages carrying live sheep to the Middle East during May to October cannot be recommended.

The AVA maintains this position. The AVA refers the department back to the previous AVA submissions and the data on which this statement was based.

It is noted that the department states an intention to cease granting export permits on 31 May 2019. To achieve the department's aim of there being no sheep travelling in June to the specified locations, cessation of granting of export permits will need to occur earlier than 31 May. Permits granted up until the 31 May will result in sheep travelling through the first few weeks of the prohibited period.

Comment on 2(d): arrangements for September and October

It should be noted that humidity rises in September in the relevant locations, and so the WBT in September and October is typically as high, or higher, than the WBT in June. This is shown in the 4 tables below (Maunsell 2003).

Additionally, historical mortality data demonstrates a similar pattern in September as in June, as illustrated in the graph below (AVA, 2018).

Given the available data, the AVA suggests that September is included in the initial periods outlined by the Department, and the October period determined later, taking into consideration the results from monitoring in May.

Source: AVA 2018

[https://www.ava.com.au/sites/default/files/AVA Literature Review Live Sheep Export May 2018.pdf](https://www.ava.com.au/sites/default/files/AVA_Literature_Review_Live_Sheep_Export_May_2018.pdf)

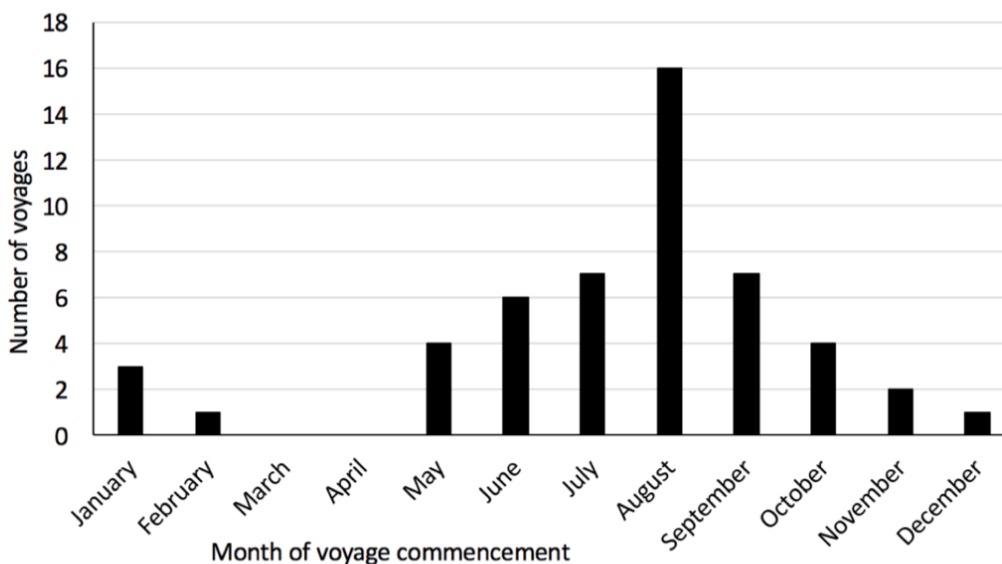


Figure 5. Number of voyages (n=51), by month of voyage commencement, when there were > 15,000 sheep on the ship from Australia to the Middle East between 2005 and 2017 and total sheep mortality rates were ≥ 1.5%.

Source: Maunsell, 2003

Table A.7 Wet Bulb Distribution for Kuwait (°C) for January through December

Kuwait	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	5.1	10.8	13.4	14.8	13.9	16.4	4.6	18.4	15.5	12.7	3.8	6.0
1st percentile	5.2	11.2	13.7	14.8	14.7	16.6	18.6	19.0	16.5	13.6	4.1	7.0
2nd percentile	5.5	11.5	14.0	14.9	14.8	16.7	18.6	19.2	16.7	14.3	4.5	7.7
5th percentile	6.2	12.4	14.4	15.8	15.4	17.7	18.8	19.6	17.4	15.1	7.1	8.2
10th percentile	6.7	12.8	15.0	15.9	16.2	18.0	19.2	19.8	17.9	15.5	10.5	9.3
20th percentile	7.0	13.0	15.5	16.7	17.3	18.9	19.7	20.4	18.6	16.3	11.5	10.0
30th percentile	8.2	13.8	16.1	17.5	17.9	19.2	19.9	20.8	19.0	17.0	12.4	11.9
40th percentile	9.3	14.7	16.4	18.2	18.3	19.4	20.3	21.0	19.4	17.7	13.4	13.1
50th percentile	10.0	15.1	16.7	18.5	18.6	19.7	20.6	21.3	20.0	18.5	13.6	13.8
60th percentile	10.6	15.8	17.3	18.9	19.0	19.9	21.0	21.8	20.4	19.0	13.9	15.4
70th percentile	11.1	16.4	17.9	19.6	19.5	20.3	21.5	22.3	20.9	20.1	14.6	16.3
80th percentile	11.8	16.9	18.3	20.6	19.9	20.7	22.0	23.4	21.6	20.9	15.5	17.1
90th percentile	12.7	17.9	19.2	21.7	20.5	22.0	23.9	26.1	22.7	22.7	16.7	18.7
95th percentile	15.5	18.8	20.2	22.8	21.0	22.7	24.7	28.4	24.9	23.8	17.3	19.1
98th percentile	16.7	19.7	20.4	22.9	22.2	24.1	25.7	29.7	27.1	25.1	18.6	19.6
99th percentile	16.9	20.0	20.6	23.1	23.5	24.5	26.5	29.9	28.2	26.2	18.7	19.8
maximum	17.2	20.3	20.9	23.4	23.9	25.1	29.1	30.4	28.6	26.7	18.7	19.9

Table A.4 Wet Bulb Distribution for Doha (°C) for May through October

Doha	May	Jun	Jul	Aug	Sep	Oct
Minimum	17.0	19.2	20.6	21.5	21.4	19.4
1st percentile	17.3	19.3	20.9	22.1	22.3	20.4
2nd percentile	17.6	19.6	21.1	22.5	22.7	20.8
5th percentile	18.3	20.8	21.5	23.3	23.2	21.7
10th percentile	18.8	21.1	22.1	24.7	24.2	22.5
20th percentile	19.6	21.6	22.8	25.9	24.9	23.1
30th percentile	20.4	22.5	23.8	26.9	25.5	23.4
40th percentile	20.9	23.3	25.1	28.1	26.0	23.7
50th percentile	21.5	23.8	26.1	28.8	26.8	24.3
60th percentile	22.0	24.4	26.9	29.2	27.1	24.7
70th percentile	22.7	24.9	28.0	29.6	27.5	25.5
80th percentile	23.4	25.8	28.8	29.9	28.1	26.0
90th percentile	24.4	27.1	29.6	30.4	29.1	26.6
95th percentile	25.0	27.6	30.4	30.7	29.6	27.4
98th percentile	25.8	28.0	31.0	30.9	30.1	27.9
99th percentile	26.8	28.6	31.5	31.3	30.2	28.5
maximum	31.6	28.9	31.6	31.3	30.2	28.6

Table A.3 Wet Bulb Distribution for Dubai (°C) for January through December

Dubai	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	9.2	12.0	15.6	16.0	18.3	20.4	21.7	22.7	22.5	18.1	16.2	13.5
1st percentile	9.5	12.2	15.7	16.5	18.5	21.1	22.8	23.6	22.6	19.4	16.5	13.9
2nd percentile	10.1	12.4	15.8	16.9	19.0	21.4	22.9	24.0	22.6	20.0	16.8	14.3
5th percentile	11.9	13.3	16.1	17.4	19.9	22.1	23.5	24.5	23.0	20.4	17.6	14.8
10th percentile	12.2	13.8	16.6	17.7	20.4	23.3	24.7	24.9	23.9	21.4	18.1	15.4
20th percentile	13.6	14.1	17.5	18.5	21.1	24.1	25.7	25.5	25.0	22.3	18.6	16.7
30th percentile	14.1	14.6	17.7	19.1	22.0	24.8	26.3	26.0	25.4	22.8	19.0	17.7
40th percentile	14.7	15.4	18.1	19.8	22.4	25.3	26.9	26.4	26.0	23.2	19.4	18.2
50th percentile	15.0	15.9	18.3	20.1	23.0	25.8	27.2	26.8	26.3	23.8	19.9	18.8
60th percentile	15.2	16.3	18.6	20.3	23.3	26.3	27.6	27.3	26.7	24.2	20.1	19.2
70th percentile	15.4	16.8	18.9	20.8	23.7	26.7	28.2	27.8	27.3	24.6	20.6	19.5
80th percentile	16.5	17.2	19.3	21.2	24.2	27.4	28.4	28.2	27.6	25.4	21.2	20.0
90th percentile	18.0	17.7	20.2	21.9	25.0	27.8	29.0	29.0	28.2	26.6	22.2	20.5
95th percentile	18.6	18.1	21.0	22.8	25.7	28.3	29.2	29.3	28.5	27.3	23.3	20.7
98th percentile	19.3	18.2	21.3	23.5	26.7	29.0	29.5	30.1	28.9	27.8	24.0	21.0
99th percentile	19.5	18.2	21.4	23.6	26.9	29.1	29.8	30.4	29.1	28.1	24.1	21.3
maximum	19.9	18.3	21.4	23.7	27.7	29.3	30.1	30.5	29.5	28.7	24.1	21.7

Table A.1 Wet Bulb Distribution for Seeb (Muscat) (°C) for January through December

Seeb	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	10.0	11.6	15.6	15.8	17.6	20.8	21.0	21.6	14.5	17.5	15.9	13.7
1st percentile	11.0	11.8	15.9	15.8	18.1	21.1	22.1	23.3	16.9	18.0	16.1	14.0
2nd percentile	11.7	12.1	16.2	15.9	18.9	21.2	22.3	23.5	18.6	18.4	16.3	14.5
5th percentile	12.3	13.2	16.3	16.6	19.4	21.7	23.3	24.4	19.8	18.9	17.2	15.5
10th percentile	13.0	14.0	16.5	17.9	20.0	22.9	24.3	25.0	21.5	19.6	18.1	16.1
20th percentile	14.5	14.9	17.4	18.6	20.9	24.0	25.9	25.6	23.6	20.4	19.0	17.1
30th percentile	15.3	15.4	17.9	18.9	21.3	25.6	26.6	26.1	24.9	21.3	19.3	17.8
40th percentile	16.0	16.1	18.6	19.3	21.8	26.1	27.0	26.5	25.6	22.2	19.6	18.6
50th percentile	16.3	16.7	19.1	20.1	22.4	26.9	27.4	27.0	26.2	22.9	20.0	19.1
60th percentile	16.5	17.5	19.7	21.0	23.1	27.3	27.7	27.3	26.7	23.5	20.6	19.9
70th percentile	17.0	18.1	20.3	21.6	24.5	27.8	28.0	27.6	27.5	24.0	21.0	20.2
80th percentile	17.5	18.9	21.1	22.3	25.6	28.2	28.3	27.9	28.2	24.9	21.6	20.7
90th percentile	17.9	21.0	21.9	22.8	26.8	28.7	28.8	28.5	29.2	25.7	22.2	21.2
95th percentile	18.6	21.3	22.7	23.2	28.2	29.1	29.0	28.8	30.4	26.2	22.6	21.8
98th percentile	20.2	21.6	23.1	23.6	28.5	29.2	29.3	29.3	31.6	26.9	22.6	22.2
99th percentile	20.3	21.6	23.5	23.7	28.9	29.7	29.3	29.4	32.3	27.2	22.7	22.2
maximum	20.4	21.6	24.0	23.7	29.5	29.9	29.6	30.1	33.6	27.7	22.7	22.3

References

AVA 2018. A short review of space allocation on live export ships and body temperature regulation in sheep.

https://www.ava.com.au/sites/default/files/AVA_Literature_Review_Live_Sheep_Export_May_2018.pdf

Maunsell-Australia (2003). Development of a heat stress risk management model. Live Export Project LIVE.116, Meat & Livestock Australia