



Investigation into the reportable cattle mortality level on sea voyage from Darwin, Northern Territory to Panjang, Indonesia, December 2008.

1. Purpose

To report on the investigation into the cause of mortalities in cattle exported by sea to Indonesia, and to make recommendations with the objective of reducing the likelihood of a recurrence.

2. Summary

Overall for this vessel, there were 21 mortalities of the 1850 cattle loaded as a single consignment which equates to a mortality rate of 1.14%.

A definitive cause of these mortalities was not established.

Background

The investigation into the mortality was carried out by reviewing the following information:

1. Stockman's End of Voyage Report;
2. Stockman's Daily Reports;
3. Report from the exporter;
4. Records from the registered premises;
5. Report by the master of the vessel;
6. Report from the AQIS certifying veterinarian;
7. Records from the AQIS Accredited Veterinarian (AAV) who prepared the animals and;
8. Report from the Australian Maritime Safety Authority

Table 1: Chronology of Events

Dates	Day of Voyage	Action	Cumulative Voyage Death Total	Cumulative% Deaths
02/12/08		Loading of 1850 cattle in Darwin: 556 steers, 644 heifers and 650 cows		0
03/12/08	1	3 cow mortalities	3	0.16
04/12/08	2	8 cow mortalities	11	0.59
05/12/08	3	1 Cow mortality	12	0.64
06/12/08	4	5 cow mortalities	17	0.91
07/12/08	5	1 cow mortalities	18	0.97
08/12/08	6	Unloading in Panjang. 3 cow mortalities	21	1.14

The reportable mortality level for a short haul cattle voyage is 0.5 per cent which for this voyage was reached on day 3, 4 December 2008.

3. Findings

3.1 Mortalities in Registered Premises

The cattle exported from Darwin were present at the registered premises from 14 November 2008 until loading on 2 December 2008. The records of the registered premises indicated 5 mortalities in the cows over the preparation period. There were no mortalities in the steers and heifers over the preparation period.

The record of rejects indicated there was one reject. The reason for rejection was lameness.

3.2 Loading

The records from the exporter indicate the cattle were loaded in accordance with ASEL.

3.3 Journey

The climatic condition for the cattle decks were as follows:

Table 2: Climatic conditions:

Date	Wet bulb (°C)	Humidity (%)	Daily water consumption (L)	Daily weather conditions from daily reports
02/12/08				
03/12/08	29	80	17	Slight sea
04/12/08	29	80	24	Moderate sea
05/12/08	28	79	25	Moderate sea and swell
06/12/08	27	78	24	Very rough seas and ship rolling moderately
07/12/08	28	79	25	Rough seas and ship rolling moderately
08/12/08	26	79	25	Rough sea

No data available for Day one 02/12/08 as the ship was loading. The figures reported are averages across the 4 cattle decks.

Table 3: Mortalities by Cause

Cause	Injury	Undetermined
#	1	20

Table 4: Mortalities by deck

Deck	Mortalities	Number and Type loaded
A	6 cows	cows and steers
B	15 cows	cows and heifers
C	0	heifers and steers
D	0	steers only
Total	21	556 steers, 650 cows, 644 heifers

* Note: the above numbers provided by the exporter add to 1850 cattle in total. The cattle that died were all cows.

Post mortems were performed by the stock man on board but a definitive cause of the mortalities was not identified. There were no treatment records of individual cattle available to assess as part the investigation.

Table 5: Comparison of Deck A & B temperatures and humidity to C & D decks

Date	Wet Bulb		Humidity	
	Average Deck A & B	Average Deck C & D	Average Deck A & B	Average Deck C & D
02/12/08				
03/12/08	29.5	30	80	80
04/12/08	29.5	30	80	80
05/12/08	28.5	29	79.5	80
06/12/08	27	30	79	79
07/12/08	27	28	79	79
08/12/08	27.5	28	79	79

No data available for Day 1, 02/12/08 as the ship was loading.

4. AMSA evaluation of the vessel upon return to Australia

The AMSA evaluation of this vessel concluded that the vessel did not appear to suffer any failure of the livestock services during the voyage.

5. Conclusion

All affected animals and mortalities were cows. Cows were loaded on A & B deck. Heifers were loaded on B and C deck. Steers were loaded on A, C & D deck. No signs of disease occurred in any heifers or steers including those on A or B deck.

Cows noted by the stockman with clinical signs of disease (depression, some ocular or nasal discharge) were treated initially with non antibiotic medications with no apparent response. The on-board stockman modified the treatment to include antibiotics which are generally used for treatment of respiratory disease. As no samples were obtained for further laboratory testing and a definitive cause of the mortalities was not established.

The vessel experienced moderate to rough seas throughout the voyage.

6. Recommendations

Additional conditions are considered for future consignment prepared by the exporter until satisfactory results are achieved.

The Livestock Export Standards Advisory Group consider whether the ASEL adequately addresses the risks for the export of cows and clarify the requirements for record keeping of treatments during the voyage.

The livestock export industry amend the Stockman's handbook for the transport of cattle by sea to include the requirement for stockmen to record any treatments given including the date, type of treatment, dosage, frequency, identity of animal treated and response to treatment.

Industry to consider a program to enable the collection (and processing on return to Australia) of post mortem samples on each voyage to provide definitive information for the diagnosis in the event of a reportable mortality investigation or detection of an animal health issue.

AQIS consider placing a condition on approvals to clarify the record keeping for treatments administered.

Actions

Subsequent consignments exported by the licensed exporter were subject to conditions including the following:

- Cattle for export must be resident for 3 clear days in the registered premises immediately prior to export.
- The cattle must be provided with 10 per cent additional space over and above the requirements of the Australian Standards for the Export of Livestock.
- In addition to the accredited stockman required by the Australian Standards for the Export of Livestock, an AQIS accredited veterinarian will be required to travel with, and report on the voyage.

7. Results

The results of the consignments with additional conditions are as follows:

Table 6: Mortalities on subsequent consignments including cows

Date	Destination	Number loaded	Mortalities	Mortalities (%)
December 2008	Indonesia	1773	4 (2 cows)	0.23
January 2009	Indonesia	1236	1(no cows)	0.08

Table 7: Mortalities on subsequent consignments not including cows

Date	Destination	Number loaded	Mortalities	Mortalities (%)
December 2008	Indonesia	1405	3	0.21
December 2008	Indonesia	2906	0	0.00
January 2009	Indonesia	2969	0	0.00
January 2009	Indonesia	1746	0	0.00
January 2009	Indonesia	2958	0	0.00