



Australian Government  
Department of Agriculture

# Mortality Investigation Report 50

Cattle exported to Vietnam in January 2014

July 2014



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## Summary

On 8 January 2014, South East Asian Livestock Services Pty Ltd (SEALS) exported a consignment of cattle from Australia to Vietnam.

The mortality rate for the voyage exceeded the reportable level. The reportable level for cattle on a voyage of ten or more days is one percent. The voyage recorded a mortality rate of 3.52% (49 cattle out of 1393 loaded).

The main cause of mortality was euthanasia due to injuries sustained as a result of bad weather during the voyage.

## 1. Purpose

To report on the investigation into the cause of mortalities in cattle exported by sea to Vietnam and to determine if any action is required to reduce the likelihood of recurrence.

## 2. Information Reviewed

The Department of Agriculture (the department) investigated the mortalities by reviewing the following information:

- Report from the exporter
- End of voyage report and daily reports
- Records from the Australian Government Accredited Veterinarian (AAV) who prepared the consignment
- Report from the Master of the vessel
- Information provided by Australian Maritime Safety Authority (AMSA)
- Records from the regional departmental veterinary officer
- Records from the registered premise
- Departmental records.

## 3. Background

On 8 January 2014 SEALS exported a consignment of cattle from Geraldton, Western Australia to Hai Phong, Vietnam.

The mortality rate for the voyage exceeded the cattle reportable mortality level of one percent (for voyages ten or more days) prescribed by the *Australian Standards for the Export of Livestock* (ASEL). The voyage recorded a mortality rate of 3.52% (49 cattle out of 1393 loaded).

The department does not routinely require a veterinarian to be on board as a standard requirement for slaughter cattle to Vietnam. On voyages where there is no veterinarian on board, the LiveCorp Accredited stockperson is responsible for reporting to the department and works with the master of the vessel and the crew to maintain the health and welfare of the livestock on board.

## 4. Investigation Findings

### 4.1 The Exporter

The exporter of this consignment is experienced in preparing slaughter cattle for Vietnam and has a history of low mortality voyages. Prior to this consignment, SEALS had exported a total of 23 consignments of slaughter cattle to Vietnam since 2011. A total of 32 407 cattle were exported across the 23 consignments, with an overall mortality rate of 0.24%.

### 4.2 Preparation in the Registered Premise

The cattle were sourced and exported from Western Australia. All cattle were assembled at one registered premise between 17 December 2013 and 5 January 2014. There were no mortalities during the assembly period.

The AAV examined the cattle on 7 January 2014 and found the cattle healthy and fit to undertake the export journey. There were no cattle rejected from the consignment. Weather during the

assembly period at the registered premise was fine with temperatures ranging from 12.6°C to 36.5°C (data from Bureau of Meteorology).

#### 4.3 Loading of the vessel

Loading of the vessel commenced at 10:55 pm on 7 January 2014 and was completed by 05:10 am on 8 January 2014. A department veterinary officer was present at various times during the loading. No animals were rejected at the port during loading. Fodder, water and bedding were loaded in accordance with the ASEL.

#### 4.4 Conditions during the Journey

The vessel experienced rough weather in the Indian Ocean and extremely rough weather in the South China Sea. Due to rough weather conditions the estimated 11 day voyage took 17 days. Table 1 shows the weather conditions by day as reported in the daily voyage reports.

*Table 1 – daily weather conditions*

Day	Conditions
0	Sailed 10:00
1	Heavy rolling / pitching seas, strong aft southerly wind – Indian Ocean
2	Heavy rolling / pitching seas, strong aft southerly wind – Indian Ocean
3	Moderate / heavy pitching seas, north west wind – Indian Ocean
4	Slight pitching seas, northerly wind – Indian Ocean
5	Fresh north west wind, slight / moderate seas – Bali Sea
6	Fresh strong blustery north west wind, slight / rough seas – Java Sea
7	Strong blustery north west wind, rough pitching seas – Java Sea
8	Strong north west wind, heavy / rough pitching seas – Java Sea
9	Strong north wind, heavy / rough pitching seas – South China Sea
10	In gale warning area, strong north wind, heavy / rough pitching seas, violent pounding at times, slow speed – South China Sea
11	Gale warning, strong north wind, heavy / rough seas, near constant pounding seas, slow speed, diverted west to get closer to Vietnam Coast to avoid weather – South China Sea
12	Really bad pitching seas – South China Sea
13	Gale warning, strong north wind, heavy / rough pounding seas, slow speed – South China Sea
14	Pounding seas, but moderating – South China Sea
15	Seas better, moderate pitching swell, fresh north east wind, speed & conditions much improved – South China Sea
16	Slight seas, north west wind – South China Sea
17	Discharged completed 12:35

#### 4.5 Mortalities and treatments during the voyage

Forty-nine cattle died in the consignment of 1393. The majority of the mortalities occurred at discharge when cattle that were unable to be unloaded due to injuries sustained during the voyage were euthanised. On day four cattle on deck 3 were observed to have an increased respiratory

rate. Some cattle were relocated from deck 3 to deck 2 and respiratory rate improved on deck 3. Table 2 shows the treatments and mortality percentage by day as reported in the daily voyage reports.

*Table 2 – mortalities and treatments by day*

Day	Daily Mortalities	Cumulative Mortality	Cumulative Mortality %	Comment
0	0	0	0.00%	Vessel departed Geraldton 10am.
1	1	1	0.07%	Treatment of pinkeye for 1 steer, 1 mortality.
2	0	1	0.07%	Nil treatments
3	0	1	0.07%	Treatment of pinkeye for 2 steers
4	0	1	0.07%	Treatment of pinkeye for 3 bulls, 2 steers and 1 heifer
5	2	3	0.22%	Severe heat stress in one steer, 2 mortalities (sudden death, neck injury).
6	0	3	0.22%	6 pinkeye under observation, 2 pinkeye treatments, 13 lame animals
7	1	4	0.29%	Pinkeye improving & another animal suffering heat stress, 1 mortality - heat stress
8	2	6	0.43%	Pinkeye improving, 19 in sick pens. 2 mortalities from heat stress/heart attack.
9	3	9	0.65%	Pinkeye improving, 6 heifers with swollen legs, 18 in sick pens. 3 mortalities - 2 sudden deaths / 1 failed to respond to treatment of injuries.
10	1	10	0.72%	All animals in sick pens under observation, 2 more cases of Pinkeye. 1 mortality - failed to respond to treatment of injury.
11	2	12	0.86%	22 in sick pens. 2 mortalities.
12	0	12	0.86%	Treatment of animals for swollen legs, open.
13	0	12	0.86%	Ongoing treatment of animals in sick pens.
14	0	12	0.86%	Ongoing treatment of animals in sick pens, treatments for swollen legs and wounds.
15	0	12	0.86%	Ongoing treatment of animals in sick pens, treatments for swollen legs and wounds.
16	0	12	0.86%	Ongoing treatment of animals in sick pens, treatments for swollen legs and wounds.

17	37	49	3.52%	Discharging in Hai Phong, Vietnam. Discharge commenced at 02:30 and completed at 12:35. 37 animals were unable to be discharged due to injuries sustained during the voyage.
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#### 4.6 Mortality by cause

The causes of mortalities were recorded in the onboard stockman's daily reports. Figure 4 shows the percentage of mortalities by cause. According to the report 4 percent of the mortalities were due to heat stress, 6 percent of mortalities were due to unknown reasons, 6 percent were due to injuries sustained on the voyage, 8 percent were sudden deaths and 76 percent of the mortalities were cattle that were euthanised because of injuries sustained during the voyage. Representative from SEALS remained in Vietnam following the completion of the consignment to provide assistance to the importer. Figure 1 shows the percentage of mortality by cause.

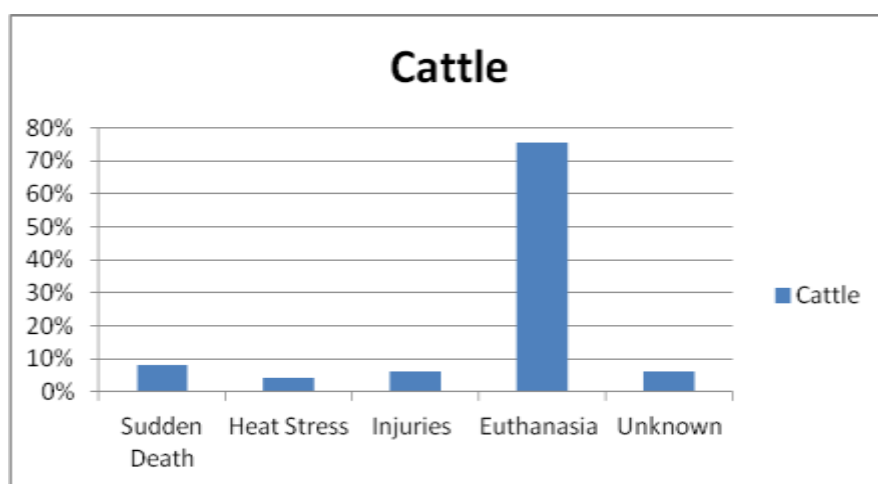


Figure 1- percentage of mortalities by cause

#### 4.7 Mortality by class

Figure 2 shows the mortality percentage for each class of cattle. Class of cattle is as follows:

- Bull – males
- Steers – castrated males
- Heifers – females that have not calved
- Cows – females that have calved

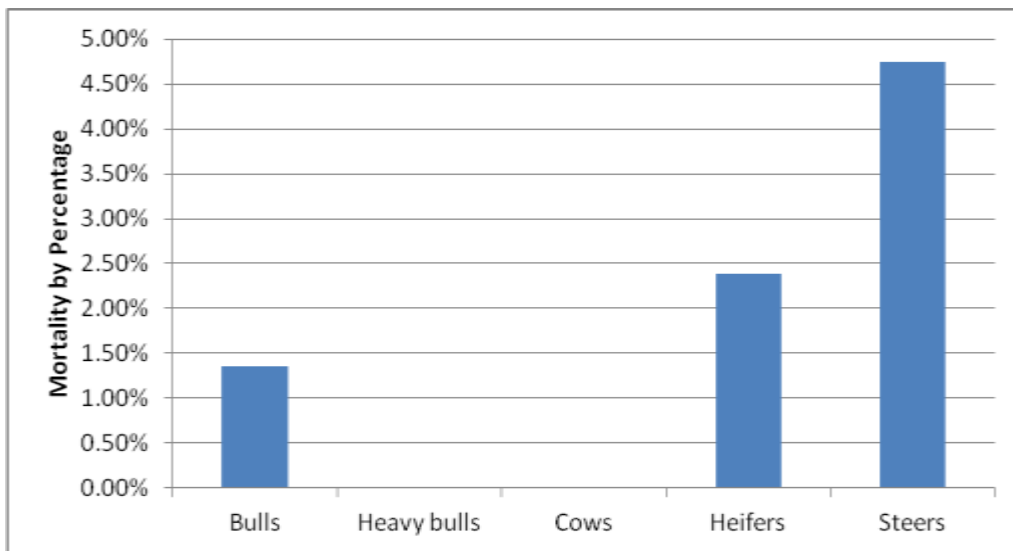


Figure 2 – mortality percentages for each class of cattle.

#### 4.8 Mortality by deck

The cattle were loaded on to decks 1 to 5 on board the vessel. Figure 3 shows the mortality percentages by deck. The vessel load plan was as follows (cattle numbers are shown in brackets):

- Steers were loaded on decks 2 (105), 3 (265), 4 (255), and 5 (217)
- Heifers were loaded on deck 2 (210)
- Bulls were loaded on decks 1 (300) and 2 (14)
- Cows were loaded on deck 1 (27)

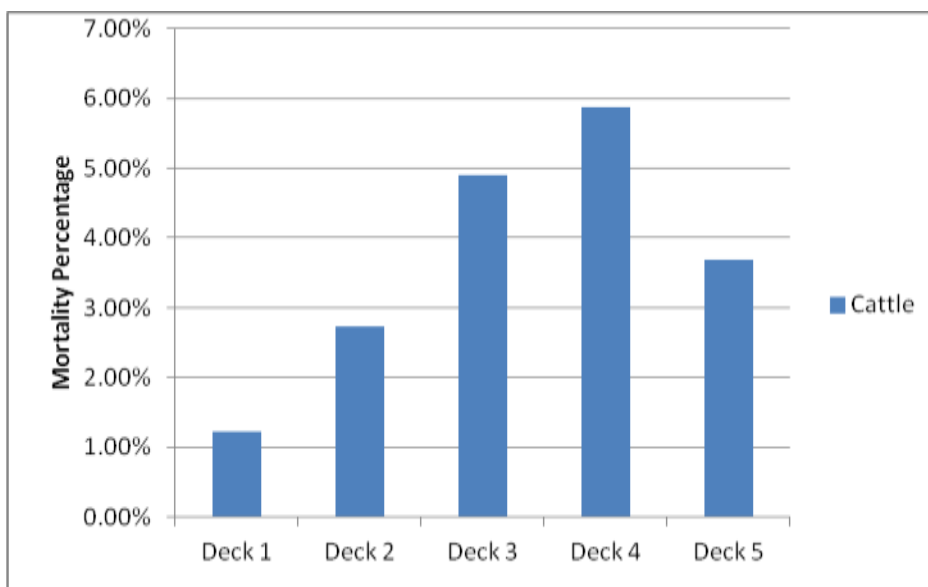


Figure 3 – mortality percentages by deck for cattle.

#### 4.9 AMSA Investigation

The Australian Maritime Safety Authority (AMSA) conducted an investigation in relation to the vessels performance and the high mortality rate under Section 37.2 of the *Marine Order Part 43*. The investigation concluded that the prolonged rough sea conditions faced by the vessel and poor circulation of air in enclosed decks apparently contributed to the high mortality of the cattle.



## **5. Conclusions**

The main cause of mortality was euthanasia due to injuries sustained as a result of bad weather during the voyage. Mortality was highest in the steers which were loaded on decks 3, 4 and 5. This is likely due to the cattle on the higher decks experiencing more vessel rolling during the period of bad weather than the cattle on the lower decks.

## **6. Actions for subsequent voyages**

For the voyage following notification of the reportable mortality event to Vietnam, SEALS undertook the following risk management strategies:

- 1        Loaded an additional 10 tons of sawdust, giving a total of 20mt for the voyage
- 2        Increased the amount of antibiotics, eye ointment and anti inflammatory drugs in the drug kit.

The result of this voyage was a mortality rate of 0.14% (2 cattle out of 1388 loaded).

The owners of the vessel have addressed the ventilation issue identified in the AMSA report and have received subsequent clearances by AMSA to carry Australian Livestock.