**Mortality Investigation Report 76 Cattle exported by sea to the Philippines in October 2018**

**Summary**

On 6 October 2018, South East Asian Livestock Services Pty Ltd (SEALS) exported 1,404 feeder cattle to the Philippines. The journey was completed in 8 days and discharged in the Philippines between 14 and 15 October 2018.

A mortality rate of 0.93 per cent (13 cattle) was reported for the cattle. The percentage of mortality for cattle exceeds the reportable mortality level of 0.5 per cent on voyages of less than 10 days as prescribed by the *Australian Standards for the Export of Livestock* (ASEL).

Of the 13 cattle mortalities reported during the voyage, one was a lean bull, eight had clinical signs of pneumonia, two were downers and two had splayed hips. All mortalities were euthanised by the stockperson. The exporter suggested possible heat stress leading to respiratory disease (pneumonia) was the contributing factor of the majority of mortalities.

**Information reviewed**

The department reviewed the mortalities by assessing the following information:

1. report from the exporter
2. daily reports, the end of voyage report and additional information from the accredited stockperson who accompanied the consignment on board the vessel
3. load plans and ship space calculations from the exporter
4. documents from the Australian Government Accredited Veterinarian (AAV) who prepared the consignment
5. report from the Master of the vessel
6. documents and information from the regional department veterinary officer (DVO)
7. records from the registered premises (RP)
8. department records from previous and subsequent voyages.

**Background**

Exports of all classes of cattle to the Philippines commenced in April 2005. Between the commencement of exports and this mortality event there have been 170 consignments to the Philippines carrying 268,052 cattle.

This is the first reportable mortality event for export of livestock to the Philippines as well as the first reportable mortality event to occur on the vessel used for the consignment.

The department does not routinely require an Australian Government Accredited Veterinarian (AAV) to be on board for feeder cattle exports to the Philippines. On voyages where there is no AAV on board, the LiveCorp accredited stock person 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. The department did not require an AAV on board this voyage.

**Investigation Findings**

**The Livestock**

The consignment consisted of 1,404 feeder cattle (bulls, steers and cows) averaging 414.33 kilograms. The cattle were sourced from 33 properties in the Northern Territory.

**Preparation in the registered premises**

Three registered premises (RPs) were used for this consignment. All are located in the Northern Territory and are routinely used to prepare livestock including cattle for export. 1,406 cattle arrived at the RPs between 10 September and 4 October 2018 and were held until 6 November 2018.

The required time for cattle to be held in an RP for short haul voyages with a single port of discharge is one clear day (a clear day does not include the days on which the livestock arrived at and departed from the premises).  The cattle in the consignment met the ASEL requirements of minimum length of time that livestock must remain in an RP.

During this period, the weather was mostly fine with a maximum temperature of 40.1°C (Bureau of Meteorology, 2018). The 1,406 cattle were examined by an AAV at the three RPs between 5 and 6 October 2018 and all but one were assessed as fit and healthy for export. The AAV rejected the animal due to ill thrift (failure to eat) and was not fit to load. No other health issues were identified at the RPs. On 6 October 2018, 1,405 cattle were trucked to Darwin for loading.

**The vessel**

The vessel involved in this incident is a purpose built livestock carrier and is used for livestock export to a range of markets including Brunei Darussalam, China, Indonesia, Japan, Malaysia, Philippines, Russia, Sabah, Sarawak, Turkey and Vietnam. There have been no reportable mortality events on this vessel prior to this voyage.

**Loading onto the vessel**

Based on the information received from SEALS and the DVO, the department determined that loading was conducted in accordance with ASEL standards. A further animal was rejected at loading due to ill thrift. The exporter reported that there were no other issues relating to weather or delays. During the final load inspection (while cattle were still loading) the DVO noted that there was excessive slipping of cattle on two decks of the vessel. The DVO stopped the loading inspection to reduce stress, and notified SEALS and the stockperson of four animals they identified as lame. SEALS remedied the slipping by loading four pallets of sawdust and laying it out in the affected pens.

**Conditions during the voyage**

An experienced on board stockperson was engaged for this shipment and was responsible for managing livestock health and welfare as well as reporting to the department. The department reviewed the daily and end of voyage reports provided by the stockperson. The stockperson reported that sea conditions were calm for the duration of the voyage. The temperature ranged from 25 to 30.5°C and humidity fluctuated between 72 and 86 per cent.

The decks were washed once during the voyage (all five decks were washed on day four).

The stockperson noted the cattle did not eat much fodder during the first four days of the voyage. It was noted that by day five, feed and water consumption had improved and cattle had settled. Chaff was fed on each day of the voyage to improve appetite.

**Mortalities and treatments**

There was a total of 13 cattle mortalities in the consignment of 1,404, leading to a final mortality rate of 0.93 per cent. The first mortality was recorded during the loading of livestock on the vessel. Eleven of the cattle mortalities occurred during the voyage, the final animal was a downer euthanised during discharge in the Philippines. All 13 mortalities occurred on decks A and B which were noted by SEALS as being well ventilated and open desks.

Details of mortalities are presented in Table 1.

| Table 1: Information of buffalo mortality  |
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| **Date** | **Voyage Day** | **Number of mortalities** | **Cumulative Mortality** | **Cause of mortalities** |
| 06/10/2018 | 0 (loading) | 1 | 1 | Load injury |
| 07/10/2018 | 1 | 4 | 5 | 4 x pneumonia |
| 08/10/2018 | 2 | 1 | 6 | Pneumonia |
| 09/10/2018 | 3 | 2 | 8 | 2 x downer |
| 10/10/2018 | 4 | 2 | 10 | 2 x pneumonia |
| 11/10/2018 | 5 | 0 | 10 |  |
| 12/10/2018 | 6 | 1 | 11 | Pneumonia |
| 13/10/2018 | 7 | 1 | 12 | Downer |
| 14/10/2018 | 8 | 1 | 13 | 1 x downer euthanised during discharge |

The cattle in the consignment were sourced from 33 properties of origin. The 13 mortalities occurred in cattle sourced from six of these properties. SEALS concluded that the properties of origin and/or line of cattle did not appear to be a contributing factor to the mortalities. The department reviewed the properties of origin list for previous shipments and determined that the properties of origin and/or line of cattle were not contributing factors to the high mortality rate.

The stockperson reported that cattle had little appetite in the first few days of the voyage which was attributed to travel stress.  To manage this, the cattle were fed chaff on each day of the voyage and sawdust was laid out to improve comfort and minimise the risk of slipping. There was no movement of cattle between pens or decks to minimise the possible risk of a viral infection spreading.

During the voyage, antibiotics and anti-inflammatories were used for cattle that showed signs of illness (pneumonia) or injury. SEALS and their internal veterinarian provided phone and written assistance to the stock person on a daily basis to manage the cattle and provide treatment advice.

The on board stock person determined the main cause of mortality was possible heat stress that lead to respiratory disease (manifesting as travel pneumonia).

**Exporter’s Actions**

SEALS organised for additional staff to be present during discharge of the vessel to ensure operations ran as smoothly as possible and to minimise the stress to cattle. The stock person commented that discharge went well and no issues were noted.

To address the risk of future cattle mortalities, SEALS has implemented a process of vaccinating all cattle of the specifications within this consignment (feeder cattle) against infectious bovine rhinotrachetitis, as a pre-cursor to pneumonia.

To further address the risk of future cattle mortalities and respiratory issues spreading, SEALS loaded additional veterinary medicines (including antibiotics and anti-inflammatories) on board the next consignment to the Philippines.

The department would ordinarily require an AAV to accompany the next consignment to the market. SEALS provided a request with reasoning to the department as to why an experienced stockperson would provide greater health and welfare outcomes for the livestock. The department approved the request but placed additional reporting conditions on the voyage for the stockperson to undertake as an Independent Observer could not fit on board.

Since the reportable mortality, SEALS has completed one further voyage to the Philippines, with no further reportable mortalities occurring. The extra reporting conditions were met, with no issues reported regarding the on board conditions.

Since this voyage, the vessel has completed two voyages to Indonesia, with no further reportable mortalities occurring. On the subsequent two voyages, two cattle died, one from bloat and the other was a downer.

**Australian Maritime and Safety Authority Evaluation of the Vessel**

AMSA conducted their investigation when the vessel returned to Australia in October 2018. They concluded that all livestock services were operating satisfactorily during the voyage. There was no evidence noted to indicate the high mortalities were due to the vessel's non-compliance with [Marine Order 43 (MO43)](https://www.amsa.gov.au/vessels/standards-regulations/marine-orders/%22%20%5Ct%20%22_blank). AMSA concluded that livestock injury during loading was a factor in the mortality rate.

**Conclusions**

The department’s review of the information provided indicates that all cattle were prepared and managed in accordance with ASEL standards. After review and analysis of the reports from the on board stockperson and exporter which detailed the symptoms and illnesses of the cattle on board, the department concluded the likely cause of the mortalities was multifactorial, with the majority of the mortalities largely a result of pneumonia.

The department accepted the actions implemented by the exporter and did not take any regulatory action against the exporter. However, the department directed the stock person on the next voyage (not the stock person who was on board the reportable mortality) to the Philippines to undertake extra reporting requirements to ensure the health and welfare of the animals was being managed in accordance with ASEL requirements.