**Mortality Investigation Report 55 Cattle exported by sea to Vietnam in October 2014**

**Summary**

On 17 October 2014, South East Asian Livestock Services Pty Ltd (SEALS) exported a consignment of slaughter cattle and buffalo from Darwin to Vietnam. There were 11 mortalities in the 979 cattle exported giving a mortality rate of 1.12 per cent, and two mortalities in the 297 buffalo exported giving a mortality rate of 0.67 per cent. The mortality rate in the cattle exceeds the reportable mortality level of 1.0 per cent or three animals (whichever is the greater number) for cattle on voyages of ten days or more as prescribed by the *Australian Standards for the Export of Livestock* (ASEL)*.* Only the cattle mortalities are considered in this report.

Cattle mortalities were due to injuries (7 animals) and pneumonia (4 animals).

**Information reviewed**

The department investigated the mortalities by reviewing the following information:

* initial notifications from the exporter regarding the mortality event
* mortality incident report from the exporter
* end of voyage report and daily voyage reports from the accredited stockperson who accompanied the consignment onboard the vessel
* load plans and feed dockets from the exporter
* documents from the Australian Government Accredited Veterinarian (AAV) who prepared the consignment
* report from the Master of the vessel
* documents from the regional department veterinary officer (DVO)
* records from the registered premises
* the department’s records from previous and subsequent voyages.

**Background**

SEALS is experienced in the export of slaughter cattle to Vietnam and other markets in South East Asia. In the two years before this event SEALS exported 58,238 cattle in 41 consignments to Vietnam, with 168 mortalities recorded, an overall mortality rate of 0.29 per cent for this period. In the two years since this event SEALS has exported 45,115 cattle in 33 consignments to Vietnam, with 61 mortalities recorded, an overall mortality rate of 0.14 per cent for this period.

Over the four years between 12 October 2012 and 12 October 2016 SEALS has had three (Reports 50, 55, 57) out of 74 consignments over the reportable level specified in ASEL. All of these were consignments to Vietnam. Prior to the incident in this report SEALS last reportable mortality incident was in a consignment of buffalo, also in October 2014 (Report 57).

In the two years before this event a total of 224,348 cattle were exported to Vietnam by sea with a total of 362 mortalities recorded, giving an overall mortality rate of 0.16 per cent for this period.

**Investigation Findings**

**The Livestock**

Cattle in this consignment consisted of 979 slaughter steers. The majority of the consignment (680) consisted of steers with an average weight of 520kg with the remainder of the cattle (299) weighing an average of 570kg.

**Preparation in the registered premises**

The cattle were sourced from four properties in Queensland and the Northern Territory. The cattle were assembled at two registered premises in Darwin and Katherine. The majority of cattle spent between five and 12 days in the premises before loading. This is above the ASEL requirements for a minimum of 24hrs in a registered premise for short haul voyages with one port loading and one port discharge.

During assembly of this consignment one animal was injured and required euthanasia, another died of unknown causes and was not investigated further. There were no other mortalities or health issues reported during this period.

All animals were sourced and treated in compliance with the Vietnamese importing country requirements (ICRs). The cattle were treated with an external pour on for internal and external parasites and a 7 in 1 vaccine was administered.

The cattle were examined by an Australian Government Accredited Veterinarian (AAV) and a Departmental Veterinary Officer (DVO) on 15 October 2014. No animals were rejected during this inspection.

**Loading onto the vessel**

Loading of the vessel commenced on 16 October 2014 and was completed on 17 October 2014. A DVO was present at various times during the loading. No cattle were rejected during loading, one buffalo was rejected due to lameness. Fodder, water and bedding were loaded in accordance with ASEL.

Cattle and buffalo were loaded in accordance with minimum pen areas specified in ASEL. The vessel has five decks, decks A-E, with A being the top deck of the ship. The consignment of 979 cattle was mainly distributed over decks B-E with a small number (15 head) loaded on deck A.

**Conditions during the journey**

The department does not require an Australian Government Accredited Veterinarian (AAV) to be on board as a standard requirement for cattle to Vietnam. On voyages where there is no veterinarian on board the Australian Livestock Export Corporation Ltd (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.

Slight to moderate seas were reported during the voyage. The dry bulb temperature ranged between 30.3°C to 33.3°C and the humidity from 78% to 78.8%. Deck and bedding conditions were reported as dry and comfortable throughout the voyage, with additional sawdust used at times. Average feed and water consumption per head was recorded daily, and was satisfactory throughout the voyage.

**Mortalities and treatments**

There were a total of eleven mortalities from the 979 cattle loaded which are detailed in Table 1.

**Table 1: Details of voyage mortalities (source: exporter information)**

| **Date of Mortality** | **Day of Voyage** | **Mortalities** | **Cause of mortality** | **Source property** |
| --- | --- | --- | --- | --- |
| 18 Oct 2014 | 1 | 1 | Injured hind legs | Property A |
| 19 Oct 2014 | 2 | 1 | Back and leg injury | Property A |
| 22 Oct 2014 | 5 | 1 | Pneumonia | Property A |
| 23 Oct 2014 | 6 | 3 | Pneumonia x 3 | Two from property A,One from property B |
| 24 Oct 2014 | 7 | 2 | Leg injury x 2 | Property A |
| 25 Oct 2014 | 8 | 3 | Leg injury x 1, Euthanased x 2 - unfit to discharge | Two from property A,One from property B |

Mortalities occurred from day 1 and continued throughout the voyage. In the mortality incident report submitted to the department these were attributed to leg and/or back injuries and pneumonia.

Cattle sourced from ‘property A’ were associated with a higher mortality rate. A total of 357 were loaded from this property, with nine mortalities recorded resulting in a mortality rate of 2.52 per cent. Cattle from this property made up 36.5 per cent of the total cattle consignment, and 82 per cent of the voyage mortalities. The two cattle mortalities in the registered premise were also from this property. These cattle spent 5 to 7 days at the registered premise before departure which is above the ASEL requirement of 24 hours. No issues with conditions at the registered premises were identified.

Throughout the voyage, the stockperson on board recorded details of symptoms, treatments and animals in hospital pens in their daily reports. The daily reports indicate at least seven steers in hospital pens were downers (animals that are weak, injured and unable or reluctant to stand) or animals with leg and back injuries or soreness. There were no comments on when, where or how the injuries occurred. From the daily reports four of the steers treated for injuries subsequently died and one was euthanased.

At least four steers received treatment for respiratory disease and on day 6 the stockperson noted treating ‘a lot of heavy breathing and runny nosed animals’. One steer in a hospital pen for respiratory disease subsequently died.
No post-mortems were carried out on any of the mortalities during the voyage.

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

The Australian Maritime Safety Authority (AMSA) did not conduct an investigation. They advised the department this was because the voyage mortality level of all livestock species (according to the definitions in Section 2 of Marine Order 43) was 1.01% (cattle and buffalo combined). AMSA advised they were satisfied that the stockman’s end of voyage report included that fresh feed and clean water was provided at all times, with ventilation working well at full capacity.

**Vessel**

The vessel transporting this consignment was also involved in Reportable Mortality #60, where a consignment of cattle–sent by a different exporter–reported a mortality rate of 0.98 per cent on a 9-day voyage to Vietnam.

In the two years, following completion of this voyage the vessel completed 28 voyages carrying a total of 41,380 cattle, 2,105 buffalo and 700 goats. The cattle recorded 65 mortalities (0.16 per cent), the buffalo six mortalities (0.29 per cent) and the goats zero mortalities.

Eight of the mortalities in this consignment occurred on Deck B where 385 of the cattle were loaded. This is the main cattle deck and carries more animals than any other deck. The department examined mortality information from other voyages on this vessel. Mortalities tend to be higher on the main cattle deck but as a proportion of total cattle loaded on a deck are within the normal range.

**Exporter’s Actions**

SEALS concluded in their mortality incident report that the cattle from ‘property A’ may have been stressed during mustering and trucking, prior to arriving at the registered premises and also noted the heavier type cattle were more susceptible to injury during loading. The vendor and agent were made aware of the issues in this consignment and instructed to take additional care and monitoring with cattle from the source property in future consignments.

SEALS also considered the cattle from ‘property A’ were more susceptible to pneumonia, due to their *Bos taurus* breeding, and therefore had an increased risk of pneumonia.

For subsequent voyages the following actions were taken:

* Cattle from this source property were vaccinated with Bovilis MH (which protects against the main bacterial pneumonia agent). They were also isolated at the registered premise to enable additional monitoring.
* When loaded, cattle from this source property were provided with a lower pen density, and provided additional bedding.
* Additional veterinary drugs were carried on board to treat signs of respiratory infection.

In two subsequent shipments, 234 and 40 cattle were loaded from this source property, with two and zero mortalities from these animals.

SEALS have also advised they no longer source *Bos taurus*-crosstype of cattle and that Rhinogard intranasal vaccine (which protects against the main viral agent for pneumonia) is currently used on any cattle considered at high risk of pneumonia.

**Conclusions**

The department concluded the mortalities were caused by injuries and pneumonia. The cattle were prepared and loaded in accordance with ASEL requirements and there was no information to link the mortalities to the preparation of the cattle in the registered premises.

The department required an AAV to accompany the next SEALS consignment to Vietnam on this vessel. This voyage reported two mortalities out of 930 cattle exported, a mortality rate of 0.2 percent, and two mortalities out of 370 buffalo exported, a mortality rate of 0.54 per cent.

The department accepts that actions taken by SEALS adequately addressed the cause of mortality.