

Mortality Report 80 - Cattle exported by sea to Vietnam in July 2019

Summary

On 21 July 2019, Frontier International Northern Pty Ltd (FIN) exported 1,852 feeder/slaughter cattle and 209 feeder/slaughter buffalo to Vietnam. The journey was completed in nine days and discharged in Vietnam over 29 and 30 July 2019.

A mortality rate of 1.19 per cent (22 head) was reported for the cattle. The percentage of mortality for cattle exceeds the reportable 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). No buffalo mortalities were recorded on the voyage. Only the cattle are the subject of this report.

The majority of the cattle mortalities during the voyage were reported as being a result of Bovine Respiratory Disease (BRD).

Information reviewed

The department reviewed the event by assessing the following information:

1. reports from the exporter
2. daily reports, the end of voyage report and post-voyage debrief from the Australian Government Accredited Veterinarian (AAV) 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. reports 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
9. the exporter's approved arrangement and approved management plans

Background

Prior to this voyage, FIN has exported 96 consignments of feeder/slaughter cattle to Vietnam with a total of 235,173 cattle. FIN has had three prior reportable mortality events, one each in 2016 (report #60), 2017 (report #70) and 2018 (report #75). The reportable mortality event in 2018 (report #75) occurred on the same vessel as this event.

Investigation Findings

The Livestock

The consignment consisted of 1,852 feeder cattle averaging 503kg. The cattle were sourced from 22 properties of origin located in the Northern Territory.

Preparation in the registered premises

One RP was used for the cattle in this consignment. It is located in the Northern Territory and is routinely used to prepare livestock including cattle for export. 2,234 cattle arrived at the RP between 8 and 18 July 2019 and were held until 21 July 2019.

The required time for cattle to be held in an RP for short haul voyages (voyages under 10 days) with a single port of discharge is 24 hours. 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 34.5°C recorded at nearby Batchelor (Bureau of Meteorology, 2019).

An AAV examined the cattle at the RP on 20 July 2019. A total of 20 cattle were rejected based on type (suitability for the importer), condition, lameness and injuries. An additional 312 head were removed from the consignment to be used for future consignments.

The DVO inspected the cattle on 20 July 2019 and noted that many of the animals (particularly the bulls) showed signs of clear nasal discharge. The DVO advised FIN to monitor the cattle onto the trucks, and to be aware that the increased stress of handling and loading could increase their susceptibility to viral respiratory diseases. FIN advised that it did consider the advice, however did not believe the issue warranted rejection of the cattle from consignment, and were comfortable that the veterinary kit on board was well stocked, bedding was loaded and all animal preparation procedures were followed per requirements.

On 21 July 2019, the AAV treated the 1,902 cattle with moxidectin as they loaded onto the trucks and transported to Darwin for loading.

The vessel

The vessel involved in this incident is a purpose built livestock carrier used for livestock export to a range of markets including China, Indonesia, Malaysia and Vietnam. There has previously been one reportable mortality event on this vessel (Report #75) involving buffalo exported to Vietnam in August 2018.

Loading onto the vessel

There were no load injuries, however there were two cattle that were not able to be removed from the trucks at the port due to temperament. These two cattle were trucked back to the RP.

Due to an error in their initial load plan, during loading FIN unloaded 48 cattle (feeder males) from the ship due to overloading to make room for the buffalo, heavy cattle, and cattle with long horns. The unloaded cattle were returned to the RP. This was not discussed with the DVO prior to unloading.

Conditions during the voyage

An experienced on-board AAV was engaged for this shipment. The AAV is responsible for reporting to the department and works with the Master of the vessel, the crew and the

stockperson to manage the health and welfare of the livestock on board. There was also one accredited stockperson on board.

The Master reported that sea conditions were moderate for most of the duration of the voyage, however rough seas were experienced on day 2. The temperature ranged from 28 to 31°C and humidity fluctuated between 77 and 79 per cent.

The AAV reported that the cattle were slow to take to the fodder on board, with feed intake increasing slowly on day 4. Chaff and molasses were used to bring the cattle on to pelleted feed.

The AAV reported that there were no maintenance issues with the vessel that affected the livestock's health. The ventilation system was effective and no evidence of heat stress was noted. The AAV reported that the decks 'remained okay' throughout the voyage and no deck washing was required.

Mortalities and treatments

There was a total of 22 cattle mortalities in the consignment of 1,852, leading to a final mortality rate of 1.19 per cent. The first mortality was recorded on day one of the voyage. Between two and four cattle died each day of the voyage. The reportable level for mortalities (0.5%) was reached on day five. The final mortality occurred on day nine during discharge.

Post-mortem inspections were carried out on 12 mortalities during the voyage. Based on the post-mortem inspections and observations, the AAV attributed the majority of the mortalities (19) to BRD, and two were attributed to haemorrhagic enteritis/atypical interstitial pneumonia – one of these also presented with fatty liver. One downer was euthanased due to a hip injury. No post-mortem examinations were conducted on the three mortalities that occurred in port.

FIN provided photographs and notes taken by the AAV during the post mortem examinations. The department also discussed the voyage with the AAV. Based on the reports, photographs, notes and comments provided by the AAV and FIN, the department determined that the suspected causes of the mortalities raised by the AAV were plausible.

The majority of the cattle that were moved to the hospital pens were moved due to pneumonia. The AAV noted that the outbreak of BRD was very acute, with a short interval between the development of clinical symptoms and death. There were several cases of lameness which responded to treatment with anti-inflammatories (Flunixin). Twenty-five cattle presenting with signs of pneumonia were treated with antibiotics (Draxxin - tulathromycin). Of these, 14 died and 11 recovered. A further 46 cattle were treated prophylactically to prevent development of BRD.

Of the mortalities, 20 were bulls (nine of which were long-horned bulls), one was a cow, and one was a steer. The AAV noted that the feeder and slaughter bulls were more likely to be affected by illness. Fifteen of the mortalities were on deck 3 of the vessel, where the slaughter bulls were loaded. Five of the mortalities occurred on deck 2 where the feeder bulls were loaded.

The mortalities occurred in cattle sourced from 11 properties of origin. As the mortalities occurred in cattle sourced from different properties, FIN concluded the property of origin did not appear to be a contributing factor to the mortalities.

Exporter's Actions

The department required FIN to provide details of how they will mitigate the risk of another BRD event on their subsequent voyage of cattle to Vietnam, including details of vaccinations, additional monitoring in the RP and additional veterinary supplies to be loaded onto the vessel. The department also required an AAV and stockperson to accompany their next voyage.

For their next consignment, FIN ensured all cattle were vaccinated against *Mannheimia haemolytica* (a bacterium commonly associated with BRD) with Bovishield One Shot MH upon induction into the RP, and all cattle were monitored at least twice per day. Additional veterinary medicines in excess of ASEL requirements were loaded.

FIN advised that it will implement the following procedures for future cattle consignments to Vietnam to mitigate the risk of another reportable mortality event:

- All cattle will be vaccinated against BRD with Bovi-Shield MH One upon induction into Darwin RPs.
- Oxytetracycline will be included in the on-board veterinary kit for the treatment of BRD symptoms.

FIN also advised that it is trialling the use of a magnesium-based product (uCALM or Emag) mixed in with the feed or water in the RP and on board the vessel to calm the cattle and reduce stress during preparation and loading.

Australian Maritime and Safety Authority Evaluation of the Vessel

AMSA conducted an investigation into the vessel when it returned to Australia in August 2019. AMSA 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 \(MO43\)](#).

Conclusions

After review and analysis of the reports from the on-board AAV and exporter which detailed the clinical signs of the cattle on board, the department determined that the suspected causes of the mortalities raised by the AAV were plausible. The department accepted the actions implemented by the exporter.