

Independent Observer summary report on *MV Shorthorn Express*

Cattle exported to China in December 2018

Report 55, February 2020

Voyage summary

A consignment of 3,234 cattle was loaded onto the *MV Shorthorn Express* in Portland, Victoria on 20 December 2018 and departed in the evening. The cattle were discharged at Jintang, China on 9 and 10 January 2019, making this a 22 day voyage.

An independent observer (observer) boarded the vessel at Portland, and remained on board until completion of discharge.

The mortality rate for the cattle was 0.25% (8 mortalities), which does not exceed the reportable mortality rate. The causes of these mortalities were not considered to be linked to any systemic failure by the exporter.

The following comments represent a summary of key observations and has been approved by the observer who accompanied the voyage.

Independent observations of the implementation of procedures to ensure health and welfare of livestock

Exporter documentation

Exporter arrangements were available to address procedures relating to livestock management from loading through to discharge, including contingencies.

Loading

Although the load plan complied with the [Australian Standards for the Export of Livestock 2011 \(version 2.3\)](#) (ASEL) requirements, the cattle were not loaded strictly in accordance with the load plan. Adjustments were made to the stocking density in some pens early in the voyage, however some pens remained overstocked throughout the voyage.

The cattle had access to fresh water on arrival in their pens and were provided feed within 12 hours.

No significant animal welfare issues were observed during loading.

Personnel

An experienced LiveCorp Accredited Stockperson (stockperson) accompanied the voyage, and was responsible for implementing the exporter's procedures to ensure the health and welfare of

the livestock throughout the voyage. The stockperson had a very attentive and caring attitude towards the cattle.

The Chief Officer (CO) intermittently inspected the cattle decks, and held regular meetings with the master to provide updates about the daily situation.

The duties of the livestock crew included feeding, monitoring, tending to nose bowls, general health and welfare checks of the livestock, wash down of decks, pen and deck maintenance, preparing animals and vessel for discharge and assisting the stockperson when required.

The observer noted that although the number of crew on-board the vessel seemed to be sufficient, generally their application to pen and deck cleaning tasks and maintenance was considered unsatisfactory. Poor maintenance, for example, not attending to leaks in the water supply system or broken nose bowls, contributed to a 20cm deep build-up of a boggy mixture of fodder, chaff and manure in most alleyways and pens.

Daily routine

Management meetings were held most days at 11.00am and were attended by the CO, stockperson, observer and occasionally the master. Issues discussed included the climatic conditions, ventilation, daily reports, feed and water issues, unwell or injured animals, and hospital pens.

Night watch crew were rostered between 6.00pm and 6.00am. Their duties included feed and water checks, cleaning troughs and checking the cattle. The observer found many nose bowls soiled with faeces that the night watch crew should have rectified.

Feed and water

Pelleted feed was supplied to the five cattle decks by chutes from 4 silos. The livestock crew then manually distributed the feed to troughs. The livestock were fed pellets twice daily, with an additional chaff feed from Day 2.

Sufficient feed was loaded for the expected 16-day voyage, plus an additional 3 days feed in reserve, in accordance with ASEL requirements. However the following factors led to a feed shortage and feed rationing during the voyage:

- Sea conditions were rough or very rough during 13 of the 19 days at sea. Vessel speed was reduced during rough weather, which increased voyage length by two days.
- The vessel diverted to the southern Chinese port of Zhoushan on Day 16 to take on additional fuel and fresh water, which led to a delay of one day.
- The vessel anchored outside Jintang Port overnight while waiting for a pilot to enable the vessel to enter the port.
- Completion of discharge subsequently took a further 19 hours.
- The observer noted that the method used for estimating remaining pelleted feed in the silos was considered unreliable. Bagged chaff calculations were considered to be fairly accurate.
- The CO and livestock crew did not manage feed distribution well.

Despite concern from Day 2 that feed supply might need to be rationed due to reduced vessel speed, fodder was not managed conservatively during the voyage, with observations of unspoiled fodder spilling out from troughs during manual supply by the crew. Fodder provision to different sized pens was also not considered, resulting in some pens not being fed ASEL-required levels for between 5 and 13 days of the voyage. Larger pens with a higher number of cattle had generally the same number of feed troughs provided as smaller pens with a lower number of cattle. This led to reduced access to feed troughs for individual cattle in larger pens and sometimes an over-supply of feed to cattle in smaller pens.

The observer reported competition for access to feed troughs increased later in the voyage with pen hierarchy becoming obvious and incidents of trampling observed. This resulted in shy feeders in larger pens not able to adequately access feed, sometimes for several feeds at a time. Very limited feed was available from late on Day 19 as the fodder supplies had been almost exhausted. It was the observer's understanding that some cattle were not fed at all during the day of discharge as no fodder remained on board, meaning ASEL standard 5.5 could not be met.

Water was loaded onto the vessel before departure from Australia in accordance with ASEL. The vessel had a reverse osmosis (RO) unit and a fresh water generator intended to produce sufficient fresh water during the voyage. However, the RO unit was not able to produce the required amount of water on many days due to rough seas, RO unit breakdown, and restricted time of use when the vessel was close to ports.

Water consumption by the cattle increased as temperature and humidity rose when the vessel approached the equator. From day 5 of the voyage, there were periods when the cattle did not have access to ad lib water because the vessel's water-generation capability was insufficient to meet demand for the reasons identified above. Water was unavailable to some or all decks—for up to 4 hours per day—for days 5, 8, 9-13, and 16-18.

Although water consumption reduced as temperature and humidity levels decreased (around day 15), the vessel diverted to the Chinese port of Zhoushan on Day 16 as a precaution. The vessel was resupplied with additional water and fuel from a barge outside the port.

Ventilation

Fresh air was supplied to the livestock by a series of ventilation pipes running along the decks. The openings were angled and positioned to direct air down to the cattle in the pens. It was reported that the ventilation system had only one setting. Hotter areas were identified within the decks due to ventilation infrastructure and impediments to air flow such as ramps, walls and piles of feed. Other obstructions inhibiting ventilation included feed troughs suspended from overhead wires when not in use.

During the hotter period of the voyage, some hatches were opened in an attempt to improve the deck conditions, resulting in a reduction in temperature and humidity observed on decks 4 and 5.

During the voyage, the cattle encountered mild southern Australian temperatures, high heat and humidity around the equator, then very low temperatures in northern China, as shown in the table below:

Day	Dry bulb temperature range °C	Relative humidity %
2	22-26	58-69
6	33-34	77-90
10	31-34	82-86
14	28-31	69-85
20	2-9	58-64

Pen conditions

The observer commented that unsatisfactory pen and deck conditions were experienced during the voyage. These conditions were mainly due to inadequate corrective maintenance by crew, leaking water pipes and fire hydrants, malfunctioning nose bowls, build-up of the thickness of the pad, spilled feed in the aisles, high temperatures and humidity and blocked drains.

Washing of decks commenced on Day 7, with Deck 1 washed five times throughout the voyage. The remaining four decks were washed four times each on days 8/9, 12, 15 and 18. Wash down was observed to improve pen, environmental and animal welfare conditions.

During the deck wash on days 9 and 12, flooding of Deck 1 was experienced due to deficiencies in the drainage system. The flooding reduced the number of hatches that could be opened to manage temperature and humidity conditions. This resulted in an increase in relative humidity experienced by cattle on Deck 1, with the observer approximating 5% of animals with a heat stress score of 3.5 on day 9.

During washing of the decks, cattle in the hospital pens on decks 1 and 2 were affected by overflow of wash-down material from the decks above resulting in soiling of feed and water troughs and coat contamination.

Sawdust was used in the hospital pens after each deck wash but not applied in general stock pens. The remainder of the sawdust was reserved for after the final deck wash.

Health and welfare

Days 7-15 recorded wet bulb temperatures ranging from 29-34°C as the vessel crossed the equatorial region. Varying degrees of heat stress became apparent to the observer over these days. Most animals exhibited behaviours consistent with a heat stress score of 0-2. These adverse environmental conditions, particularly noted by the observer in pens close to the engine room and ventilation shafts, coupled with the lack of continuous water supply, contributed to the increased susceptibility of up to 5% animals who were observed with a heat stress score of 4 over days 7-13. A reported <10% of cattle were more affected on days 7-9, and were ascribed heat stress scores from 3.5 to 4 by the observer. By day 15, the average wet bulb temperature reduced to 25°C, with no cattle observed affected by heat.

Approximately 100 treatments were administered during the voyage. When a leg injury was identified, the stockperson acted decisively to move the animal to the hospital pen and provide treatment. Cattle were also treated for leg lacerations, eye problems, shy feeding and diarrhoea.

The observer reported that the storage and utilisation of drug administration devices was not hygienic.

Hospital pens were used as required. The hospital pen on Deck 5 was poorly positioned in a location which was considerably hotter due to the adjacent engine room.

Of the eight mortalities during the voyage, six occurred at sea. The causes of death were not definitively determined as no post mortems were performed. Two more cattle were rejected at discharge by the importer because of leg injuries. These cattle could not be euthanased immediately as Chinese authorities would not allow use of the captive bolt in port. These cattle were left on the vessel and the bosun was instructed by the stockperson to euthanase both of them.

Discharge

The discharge was efficient and the crew appeared calm and caring when handling the cattle. Fresh water was available throughout the discharge process. Delays in unloading were encountered because of a limited availability of trucks.

Conclusion

The observer noted the health and welfare of the cattle was adversely affected during the voyage due to a number of contributing factors, some of which were outside the control of the exporter. These include the shortage of ad lib water, inadequate feed availability, rough sea conditions, a longer voyage than expected, prolonged hot and humid conditions around the equator, inadequate ventilation, flooding of Deck 1 during deck washing, poor pen and deck maintenance and exposure to very low temperatures on arrival in China.

The exporter was required to review and amend processes to address the issues identified during this voyage.

Representative photographs of the voyage

Day 1 Cattle in pen – no issues identified



Day 4 Cattle in pen – no issues identified



Day 6 Cattle showing heat stress



Day 7 Cattle in poor pen conditions



Day 13 Cattle in pen after deckwash



Day 18 Cattle in pen – no issues identified

