

Mortality Report 79 - Cattle exported by sea to China in June 2019

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Summary

On 28 May 2019, Southern Australian Cattle Company Pty Ltd (SACC) exported 1,832 slaughter cattle to China. The journey was completed in 15 days and discharged in China over 13 and 14 June 2019.

A mortality rate of 1.36 per cent (25 head) was reported for the cattle. This exceeds the reportable mortality level of 1 per cent on voyages of 10 days or more as prescribed by the *Australian Standards for the Export of Livestock* (ASEL).

On investigation by the department, gastroenteritis was found to be the main cause of the mortalities.

An Independent Observer (IO) accompanied the voyage and was directed to monitor, observe and report on activities in approved export programs for the purpose of ensuring the health and welfare of the cattle during the course of the export activities.

Information reviewed

The department reviewed the mortality incident by assessing the following information:

1. report from the exporter
2. daily reports, the end of voyage report and additional information from the Australian Government Accredited Veterinarian (AAV) who accompanied the consignment on board the vessel, including but not limited to photographs of all post mortems conducted during the voyage
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.
9. IO report (IO summary report is [available here](#))

Background

Exports of slaughter cattle to China by sea commenced in February 2017. Between the commencement of slaughter cattle exports and this mortality incident there have been 25 consignments to China carrying a combined total of 50,780 cattle.

There have been two reportable mortality incidents for slaughter cattle exported to China by sea prior to this incident (Report #73 (June 2018) and Report #74 (July 2018)). Both incidents occurred on different vessels to this report.

The department does not routinely require an AAV to be on board for slaughter cattle exports to China. However, as this was the first slaughter cattle consignment exported by sea to China by SACC, the department required an AAV to accompany the consignment. 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. The department also required an IO to accompany the consignment.

Investigation Findings

The Livestock

The consignment consisted of 1,832 slaughter Bos Taurus cattle (bulls and steers) averaging 582 kilograms bodyweight. All cattle were purchased from feedlots or farms with assisted feeding. The cattle were sourced from 22 properties across south-east Western Australia.

Preparation in the registered premises

One registered premises (RP) was used for this consignment. The RP is located in Western Australia and is routinely used to prepare livestock including cattle for export. 1,875 cattle arrived at the RP between 10 May and 12 May 2019 and were held until 27 May 2019.

The required time for cattle to be held in an RP for long haul voyages is two clear days (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 for the minimum length of time that livestock must remain in an RP prior to export.

During this period, the weather was mostly fine with a maximum temperature of 30°C (Bureau of Meteorology, 2019). An AAV examined 1,852 cattle at the RP between 26 and 28 May 2019, and rejected a total of 19 head from the consignment. Of the 19 head, nine were rejected for tag issues, six for lameness, one for acute blight, one for rectal prolapse, one for enteritis and one for an injured horn. One mortality occurred with the cause not determined, however no other health issues were identified at the RP. On 27 May 2019, 1,832 cattle were trucked to Fremantle 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 China, Indonesia, Malaysia 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 the exporter and the department veterinary officer, the department determined that loading was conducted in accordance with ASEL. No cattle were rejected at loading. The exporter reported that there were no other issues relating to

weather. However, the exporter reported that loading of the vessel had to be split over two days as there was a delay in trucking due to the staff at the RP not working during the night.

Conditions during the voyage

An experienced on board AAV 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 AAV. The AAV reported that sea conditions varied from slight to rough over the course of the voyage. The temperature ranged from 18 to 27°C and humidity fluctuated between 69 and 84 per cent. It was noted by the AAV that decks 4 and 5 appeared hotter, in particular hold 3 around the engine room. The AAV provided several possibilities as to the cause of the increased heat in those areas.

The decks were washed once during the voyage (all five decks were washed between days ten and eleven).

On day 14 of the voyage (11 June 2019), the main engine of the vessel broke down and the department was informed that significant delays were to be expected. The engine was repaired and the vessel was underway again on day 15 of the voyage. Later the same day the engine broke down again and a technician was required to board the vessel. The engine was repaired and started again on day 16 of the voyage.

The on-board AAV reported that there was no impact on the health or welfare of the livestock during the engine stoppage as additional fodder, in addition to their contingency, had been loaded on board the vessel. Cattle had access to water at all times and their health and welfare was monitored regularly by the AAV and stockperson.

Mortalities and treatments

There was a total of 25 mortalities in the consignment of 1,832 cattle, leading to a final mortality rate of 1.36 per cent. The first mortality was recorded on day five of the voyage. Of the 25 mortalities, 23 occurred during the voyage with the final two occurring during discharge of the vessel. 22 mortalities occurred on decks four and five of the vessel. Details of mortalities are presented in Table 1.

Date	Voyage Day	Sea/Port	Number of mortalities	Cumulative Mortality	Cause of mortalities
29/05/2019	1	Sea	0	0	
30/05/2019	2	Sea	0	0	
31/05/2019	3	Sea	0	0	
01/06/2019	4	Sea	0	0	
02/06/2019	5	Sea	1	1	Acidosis
03/06/2019	6	Sea	2	3	1x Gastro-enteritis, 1x Unknown
04/06/2019	7	Sea	1	4	1x Gastro-enteritis
05/06/2019	8	Sea	5	9	2x Enterotoxaemia/Pulpy Kidney, 2x Gastro-enteritis, 1x Unknown
06/06/2019	9	Sea	4	13	3x Gastro-enteritis, 1x Unknown

Table 1: Break up of cattle mortalities by day and cause

Date	Voyage Day	Sea/Port	Number of mortalities	Cumulative Mortality	Cause of mortalities
07/06/2019	10	Sea	4	17	4x Gastro-enteritis
08/06/2019	11	Sea	5	22	4x Gastro-enteritis, 1x Fibre ball
09/06/2019	12	Sea	1	23	1x Gastro-enteritis
10/06/2019	13	Sea	0	23	
11/06/2019	14	Sea	0	23	
12/06/2019	15	Sea	0	23	
13/06/2019	16	Sea	1	24	1x Unknown
14/06/2019	17	Port	1	25	1x Misadventure/ injury

The mortalities occurred in cattle sourced from eight of the 22 properties of origin with the majority of the mortalities (16 head) being sourced from two properties. SACC concluded that the properties of origin and/or line of cattle did not appear to be a contributing factor to the mortalities. A vast majority of the consignment was sourced from these two properties meaning that the mortality rate by property of origin was not significantly increased for any specific property.

During the voyage, antibiotics and anti-inflammatories were administered to cattle that showed signs of illness or injury. Of the 28 cattle treated throughout the voyage, predominantly for pneumonia or lameness, three died.

The main cause for 16 mortalities was determined to be gastroenteritis. The AAV conducted post mortem examinations on 23 of the mortalities, with photo evidence supporting the claim that gastroenteritis was the contributing factor for the majority of mortalities.

The AAV made note that there was a correlation between the number of mortalities and the hottest part of the voyage. In particular decks 4 and 5, hold 3 – the area identified by the AAV as hotter than other parts of the vessel – experienced over 70 per cent of the mortalities. It was noted that the mortalities stopped quite abruptly on day 13. The AAV stated that by this stage the disease appeared to have “run its course”, however it seemed very likely that heat was a contributing factor to the mortalities. The AAV noted on post mortem examination that several animals felt quite hot assuming an increased core body temperature, which could have been exacerbated by the high body condition score of these animals.

Exporter’s Actions

To address the risk of future cattle mortalities, SACC loaded additional veterinary medicines (including antibiotics and anti-inflammatories) on board the next consignment to China. SACC also determined that if they charter this vessel in the future, they will only load pastoral type cattle in the decks around the engine room.

To further address the risk of future reportable mortality incidents, the department required SACC to develop a management plan for their next consignment of slaughter cattle to China. The management plan developed by SACC includes details of the following:

- The amount of fodder and bedding that will be loaded onto the vessel based on calculations of the estimated voyage length

- The volume of veterinary medicines and supplies that will be loaded on the vessel
- Management of respiratory disease, including pre-export vaccination
- Breed/type, expected body score, approximate weights and coat description of the livestock in the consignment
- Properties of origin and numbers of livestock from each

The department required SACC provide further detail regarding veterinary drugs available for the voyage which was provided. The consignment was completed in August and did not result in a reportable mortality incident.

Australian Maritime and Safety Authority Evaluation of the Vessel

AMSA conducted their investigation when the vessel returned to Australia in June 2019. AMSA determined that no further repairs were required beyond the repairs made during the voyage. They concluded that all livestock services were operating satisfactorily during the voyage and were compliant with [Marine Order 43\(MO43\)](#).

Conclusions

The department's review of the information provided indicates that all cattle were prepared and managed in accordance with ASEL. After review and analysis of the reports from the AAV, exporter and IO which detailed the clinical signs and illnesses of the cattle on board, the department concluded the likely cause of the mortalities was multifactorial. The department determined that SACC's suggestion that the majority of the mortalities largely a result of gastroenteritis is plausible.

The department required an AAV and an IO to accompany the consignment. Both the AAV and IO reported that the health and welfare of the livestock on board was managed appropriately and in accordance with ASEL. The findings of the IO were consistent with those of the AAV.