LiveCorp

Handbook for shipboard stockmen and veterinarians
(Sheep and goats)

John Lightfoot

Fifth Edition – April 2008
## Contents

Introduction ............................................................................................................. 3  
Confidentiality ........................................................................................................ 5  
Role of shipboard stockman and veterinarian ....................................................... 7  
Before you leave home ....................................................................................... 8  
Visas ..................................................................................................................... 9  
Seaman’s Books .................................................................................................... 10  
On arrival at the ship ........................................................................................... 12  
Management on board ......................................................................................... 13  
Export preparation—sheep and goats .................................................................. 15  
Sheep and goat exports to Saudi Arabia .............................................................. 17  
Loading ................................................................................................................ 19  
Typical daily routine at sea .................................................................................. 21  
First day at sea ..................................................................................................... 22  
Common health problems ..................................................................................... 23  
Post-mortems at sea ............................................................................................. 30  
Common post-mortem findings .......................................................................... 31  
Goats ................................................................................................................... 32  
Responsible drug use ......................................................................................... 33  
Humane destruction ............................................................................................. 35  
Carcass disposal ................................................................................................... 35  
Action in the event of a problem at sea ............................................................... 36  
The day before arrival ......................................................................................... 37  
Discharge ............................................................................................................. 38  
Record keeping and reporting ............................................................................ 39  
Returning home ................................................................................................... 41  
Appendix A: Personal check list .......................................................................... 42  
Appendix B: Emergency contacts ......................................................................... 43  
Appendix C: Live export terminology ................................................................... 44  
Appendix D: Daily report .................................................................................... 45  
Appendix E: End of voyage report ....................................................................... 47  
Appendix F: Maps ................................................................................................. 48  
Appendix G: Insurance ......................................................................................... 51

## Acknowledgement

Earlier editions of this handbook were compiled by Dr Tony Brightling. His contribution is gratefully acknowledged.
Introduction

Australia is the world’s largest exporter of sheep and goats.

Sheep

Currently about three and a half million sheep are exported live each year, mainly to the Middle East. The live sheep trade began in earnest in the early 1970s, at the time of the ‘oil boom’. During the 1970s and 80s, the sheep exported live were nearly all full-mouth, heavy wethers. They were used to feed the guest workers and poorer people in the region. Mutton from Australian live export sheep killed in the Middle East was the cheapest fresh red meat available.

Local slaughter and consumption of fresh meat rather than chilled or frozen product was preferred partly because of tradition and partly for religious reasons – there was greater confidence that the meat was ‘halal’ if the animals were handled and killed locally by Muslim slaughtermen.

Over the last fifteen years there has been a steady shift in the type of animals exported. Whilst heavy wethers are still an important part of the trade, there has been a steady increase in the proportion of young sheep and fat-tails: higher value animals that supply the middle and upper end of the market.

The Arabian Gulf countries of Kuwait, Bahrain, Qatar, the United Arab Emirates and Oman have been solid customers throughout. Saudi Arabia was our largest live sheep market during the 1980s, but the trade closed down in 1990 after a series of rejected shipments and trade disputes. Exports to Saudi Arabia resumed in early 2000, but came to an abrupt halt in August 2003 after another rejected shipment. The live export trade to Saudi Arabia began again in July 2005, and is expected to once again become our largest market. However, given the history of disputes and rejected shipments, it is a particularly sensitive market.

Iran and Libya were major markets early on, but have long since dropped out of the trade. However, new markets in Jordan, Israel and Palestine have come on stream.

Small numbers of live sheep are exported to South-East Asia, mostly as air shipments for Ramadan.
About 75% of the sheep that are exported live leave from Fremantle. Most of the others are exported from either Adelaide or Portland. Once or twice a year there is a small shipment from Devonport.

![Australian Sheep Exports Graph]

### Table 1 – Live sheep exports by country of destination, 2001 to 2007

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>2,140,851</td>
<td>1,873,041</td>
<td>1,411,195</td>
<td>1,072,089</td>
<td>1,193,635</td>
<td>1,032,395</td>
<td></td>
</tr>
<tr>
<td>Kuwait</td>
<td>1,539,700</td>
<td>1,569,807</td>
<td>1,498,537</td>
<td>1,259,904</td>
<td>890,545</td>
<td>962,163</td>
<td>930,178</td>
</tr>
<tr>
<td>Bahrain</td>
<td>388,172</td>
<td>385,878</td>
<td>410,508</td>
<td>490,210</td>
<td>521,455</td>
<td>556,843</td>
<td>561,522</td>
</tr>
<tr>
<td>Oman</td>
<td>481,484</td>
<td>352,794</td>
<td>258,967</td>
<td>289,170</td>
<td>358,972</td>
<td>320,030</td>
<td>539,556</td>
</tr>
<tr>
<td>Jordan</td>
<td>542,366</td>
<td>582,617</td>
<td>498,999</td>
<td>930,343</td>
<td>884,886</td>
<td>684,940</td>
<td>267,829</td>
</tr>
<tr>
<td>Qatar</td>
<td>308,369</td>
<td>282,348</td>
<td>180,964</td>
<td>137,406</td>
<td>179,885</td>
<td>191,669</td>
<td>191,850</td>
</tr>
<tr>
<td>UAE</td>
<td>681,654</td>
<td>466,421</td>
<td>225,313</td>
<td>196,095</td>
<td>230,775</td>
<td>209,373</td>
<td>185,754</td>
</tr>
<tr>
<td>Israel</td>
<td>195,752</td>
<td>243,127</td>
<td>116,409</td>
<td>32,189</td>
<td>5,000</td>
<td>19,840</td>
<td>35,000</td>
</tr>
<tr>
<td>Egypt</td>
<td>271,401</td>
<td>139,285</td>
<td>15,730</td>
<td>17,189</td>
<td>20,711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lebanon</td>
<td>46,307</td>
<td>35,622</td>
<td>17,189</td>
<td>20,711</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palestine</td>
<td>37,890</td>
<td>39,000</td>
<td>18,768</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE Asia</td>
<td>29,222</td>
<td>31,220</td>
<td>29,422</td>
<td>30,415</td>
<td>39,129</td>
<td>26,047</td>
<td>28,334</td>
</tr>
<tr>
<td>Other</td>
<td>148,397</td>
<td>61,763</td>
<td>60,226</td>
<td>10,697</td>
<td>2,184</td>
<td>2,494</td>
<td>611</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,811,565</strong></td>
<td><strong>6,062,923</strong></td>
<td><strong>4,742,227</strong></td>
<td><strong>3,397,140</strong></td>
<td><strong>4,184,920</strong></td>
<td><strong>4,167,034</strong></td>
<td><strong>3,773,029</strong></td>
</tr>
</tbody>
</table>

* Source - ABS
Goats

Many thousands of goats were exported to the Middle East during the mid 1980s. Most were feral goats trapped on pastoral holdings in the Flinders Ranges in SA, Western Division of NSW or Pilbara in WA. The results were patchy. Some shipments went well, but others had unacceptably high mortalities. Although there was a market for Australian goats in the Middle East, the trade fell away because a satisfactory export outcome could not be guaranteed.

The live goat export trade has revived from 2000 onwards. With more practical know-how, greater emphasis on export preparation, and a shift from feral to farmed goats - much better and more consistent export outcomes have been achieved.

Southeast Asia, especially Malaysia, has also expanded as a market for Australian goats.

With resumption of the live export trade to Saudi Arabia, the number of goats exported live is expected to increase, especially for Ramadan and the Haj.

![Australian Goat Exports](chart)

### Table 2: Live goat exports by country of destination, 2001 to 2007

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>30,927</td>
<td>52,755</td>
<td>38,675</td>
<td>33,397</td>
<td>26,418</td>
<td>42,838</td>
<td>69,515</td>
</tr>
<tr>
<td>Indonesia</td>
<td>21</td>
<td>74</td>
<td>64</td>
<td>1,570</td>
<td>269</td>
<td>5,928</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>18,690</td>
<td>2,421</td>
<td>2,965</td>
<td>8,377</td>
<td>10,898</td>
<td>11,103</td>
<td>3,116</td>
</tr>
<tr>
<td>Madagascar</td>
<td>2,800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>1,250</td>
<td>189</td>
<td>375</td>
<td>41</td>
<td>82</td>
<td>2,300</td>
<td></td>
</tr>
<tr>
<td>Oman</td>
<td>1,874</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brunei</td>
<td>1,853</td>
<td>2,899</td>
<td>3,419</td>
<td>3,240</td>
<td>1,410</td>
<td>1,336</td>
<td>1,856</td>
</tr>
<tr>
<td>Mauritius</td>
<td>2,509</td>
<td>2,200</td>
<td>3,000</td>
<td></td>
<td></td>
<td>620</td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>100</td>
<td>228</td>
<td>473</td>
<td>675</td>
<td>1,052</td>
<td>540</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>23,856</td>
<td>59,758</td>
<td>14,140</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jordan</td>
<td>12,381</td>
<td>3,504</td>
<td>1,207</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>5,571</td>
<td>987</td>
<td>6,510</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8,861</td>
<td>11,501</td>
<td>3,506</td>
<td>1,560</td>
<td>676</td>
<td>926</td>
<td>1,384</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>106,019</td>
<td>136,125</td>
<td>70,913</td>
<td>50,486</td>
<td>41,732</td>
<td>57,606</td>
<td>89,933</td>
</tr>
</tbody>
</table>
The live sheep and goat export trades put a floor in the livestock market and provide healthy competition for the processing sector. They are of vital importance to rural Australia.

There is a strong community expectation in Australia that cattle, sheep and goats exported live will have a high standard of care throughout the export chain.

Shipboard stockmen and veterinarians play an important role in protecting the health and welfare of livestock on board a vessel. They also have a key role on arrival at the overseas destination, ensuring discharge proceeds smoothly, with minimum stress on the stock. The importance of these roles has been recognised by the Commonwealth Government - the Australian Standards for Export of Livestock make it compulsory for a LiveCorp accredited stock person or veterinarian to accompany all voyages.

This handbook is intended as an easy reference guide for shipboard stockmen and veterinarians travelling overseas with Australian sheep and goats.

Confidentiality

As shipboard stockman or veterinarian, you will be privy to information that is commercially sensitive, including the number and type of stock on board, destination, expected date of arrival, and performance of the consignment at sea. You are not authorised to disclose such information without prior approval from the exporter. The only exception is reporting to AQIS, as detailed later in this manual.
Role of shipboard stockman and veterinarian

The prime responsibilities of the shipboard stockman and veterinarian are to protect the health and welfare of the sheep and goats on board during the voyage, and to ensure that loading the vessel in Australia and discharge overseas proceed as smoothly as possible, with a minimum of stress on the stock.

Every ship is different and has unique challenges such as:

- Areas where stock baulk during loading and discharge;
- Injury hazards;
- Pens where ventilation is marginally better or worse than elsewhere on the ship (such as on the main deck or besides bulkheads);
- Pens that receive more radiant heat from the sun or engine room;
- Pens where the water pressure is lower than elsewhere on the ship;
- Pens that get less feed because they are at the end of the auger or top of a gravity feed pipe;
- Places where noise is a stressor; and
- Pens with a rail configuration, headroom, trough design or whatever that makes them more or less suitable for different classes of livestock.

A stockman or veterinarian who has previously travelled on a ship, has a good understanding of how it operates, and actively managing these factors can make a big difference to the overall outcome for a voyage.

A shipboard veterinarian has the additional responsibilities of overseeing the treatment of sick and injured animals, and monitoring for exotic diseases.

Shipboard stockmen and veterinarians may also be asked to participate in research activities, with collection of data during the voyage.

The first couple of voyages are generally a steep learning curve, even for stockmen and veterinarians with many years livestock experience in Australia.

As you gain shipboard experience, it is important that you become more than just an expert hand on the ship. Rather you should be part of the management team, involved with preparing the load plan, ensuring the vessel is prepared for any special stock requirements, anticipating and heading off problems before they occur, maintaining veterinary stores, reporting to the exporter, and where appropriate training the crew in sheep and goat management and handling.

If the ship carries both an Australian stockman and veterinarian, it is important that you work together as a team. You must recognise each other’s skills and experience, and must both be involved in major decisions concerning the management of stock on board.
Before you leave home

You should have a letter of appointment from the exporter as shipboard stockman or veterinarian. This should set out where and when you are to join the ship, the destination port and approximate date of arrival, and arrangements for your return to Australia. Make sure you know who is to pay for your air ticket home and who is responsible for any transit costs that may occur.

Confirm that LiveCorp has been advised of your sailing date and voyage details. LiveCorp has an overseas medical insurance policy that covers shipboard stockmen and veterinarians delivering Australian livestock overseas. The policy provides cover whilst you are on the ship, in transit after arrival and travelling back to Australia. Details of the cover provided are contained in Appendix G of this manual. The policy is only valid if LiveCorp has been advised prior to your departure. Contact with LiveCorp can be made by phone (02-9929 6755), fax (02-9929 6733) or email (rransley@livecorp.com.au).

Make sure your passport is current and is valid for at least six months after your expected date of arrival. Leave a photocopy of your passport at home and take another with you, just in case the original is lost or stolen. Extra passport photos are also helpful, especially if you intend to holiday en-route back to Australia.

All of the ships that export sheep and goats from Australia are equipped with a satellite telephone and facsimile machine. Leave the ship’s phone and fax numbers at home so you can be contacted in an emergency.

Take a current credit card (Visa Card, Master Card or American Express) with you, so that if arrangements for your return to Australia are fouled up in any way, you can pay your own way home.

You should not need any money on the ship, but should take enough cash for sundry travel costs and purchases on the way home. US$100 in small notes is handy, if you need a taxi or a snack before exchanging money to local currency.

The Lonely Planet guides are good background reading and essential if you plan to have a look around or spend time in holiday mode on the way home.

Most livestock ships have a PC on board that you can use for word processing, so if that is all you need then it is better to leave your laptop at home and use a computer on the ship. There is no great problem if you decide to take your own laptop; the ship will have the transformers needed to supply 240-volt power. However, any damage to your computer and its security whilst you are away are your responsibility.
A mobile phone with international roam can be handy when you arrive. Most families appreciate a brief call when you come into mobile phone range – to know that you are safe and well, and for an update on your return travel arrangements. Your own mobile phone allows you to make private calls independently of the ship.

Find out the ship’s policy about alcohol. Some ships are ‘dry’, with no alcohol allowed on board. Others are more relaxed, with alcohol allowed during the voyage, but not whilst the ship is in Middle Eastern waters.

If alcohol is allowed, a small personal supply taken on board can be enjoyed during the voyage, and allows you to reciprocate the hospitality that will inevitably be provided by the Master and senior officers. However, it is important that you abide by the ship’s alcohol policy, are discrete when taking alcohol on board, and do not cause offence.

Take as little other luggage as possible, so you don’t have to lug a large weight home. A checklist of personal items is included as appendix A. All of the countries in the Middle East have strict customs requirements. There are heavy penalties for possession of drugs and pornography. Also, make sure that you don’t take anything that may evoke religious or political sensitivities. If you are at all uncertain whether an item may cause difficulties, leave it behind.

**Visas**

Your need for visas depends on where you get off the ship and how you intend returning to Australia. If you are uncertain about visa or travel requirements, check with the exporter before leaving Australia. The exporter should know if a visa is required, and invariably has good contacts and an agent at the destination port, with lots of previous experience repatriating Australian stockmen and crew.

Visa requirements for the main live sheep export destinations in the Middle East are listed in Table 3.

If you don’t have a visa, and disembark in a country where you are not able to obtain one on arrival, you will be taken from the ship directly to an international airport and put on a plane out of the country.

The uncertainty of arriving overseas without a visa can be a bit unsettling on your first voyage, but shipboard stockmen often return home this way, and there generally aren’t too many hassles getting from the ship to the airport. The ship’s agent is usually keen to see you depart, and out of his care and responsibility, as quickly as possible.
Table 3. Tourist visa requirements

<table>
<thead>
<tr>
<th>Country</th>
<th>Visa requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>A tourist visa can be obtained on arrival.</td>
</tr>
<tr>
<td>Egypt</td>
<td>A tourist visa can be obtained on arrival. However, the port of Adabiya is not a major entry point for tourists, and getting a visa can be a hassle, especially if you want to leave the ship soon after arrival. If you intend visiting Egypt and have enough time before leaving Australia, it is better to arrange a visa before departure.</td>
</tr>
<tr>
<td>Israel</td>
<td>A tourist visa can be obtained on arrival. Take care not to get an Israeli visa or entry stamp in your passport, as this will prevent entry to many of the Arab countries in the region. The entry stamp for Israel can be put on a separate piece of paper, which becomes part of your passport whilst in Israel, but is handed over on departure.</td>
</tr>
<tr>
<td>Jordan</td>
<td>A tourist visa can be obtained on arrival.</td>
</tr>
<tr>
<td>Kuwait</td>
<td>A tourist visa is very difficult to obtain on arrival. If you want to visit Kuwait, a visa should be arranged before departure.</td>
</tr>
<tr>
<td>Lebanon</td>
<td>A tourist visa can be obtained on arrival.</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>There are no tourist visas to Saudi Arabia. You have to get a business visa. This must be arranged before departure. (See page 10)</td>
</tr>
<tr>
<td>Syria</td>
<td>A tourist visa can be obtained on arrival.</td>
</tr>
<tr>
<td>Oman</td>
<td>A tourist visa can be obtained on arrival.</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>Australian passport holders do not need a visa to enter the UAE.</td>
</tr>
</tbody>
</table>

Visa costs vary between countries. Charges also depend on the length of stay required. Expect to pay A$25 - A$110 for a seven day visa.
Seaman’s Books

Stockmen and Veterinarians travelling by sea to Saudi Arabia should be aware that it is now more difficult to leave the vessel at the port of Jeddah and travel to the airport to fly back to Australia. Some personnel were recently restricted from coming ashore and had to return to Australia by ship.

Saudi authorities now insist on a visa being obtained before departure. These visas cost $110 each, can only be used once and must have the following paperwork accompanying each application.

- Letter of invitation from Saudi Importer
- Letter from exporter signed and stamped from the Chamber of Commerce
- Two recent passport photographs

Another possible method of entry to Saudi Arabia is the purchase of a Seaman’s book. In Australia this book is called Record of Service Book and it can be obtained from the relevant state department offices at the following addresses.

<table>
<thead>
<tr>
<th>State</th>
<th>Issuing Authority</th>
<th>Address</th>
<th>Phone</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>NSW Maritime</td>
<td>I James Craig Rd Rozelle</td>
<td>02 9563 8511</td>
<td>$27.00</td>
</tr>
<tr>
<td>WA</td>
<td>Dept of Planning and Infrastructure</td>
<td>Marine House 1 Essex Rd Fremantle</td>
<td>08 9216 8204</td>
<td>$7.00</td>
</tr>
<tr>
<td>NT</td>
<td>Dept of Planning and Infrastructure</td>
<td>Level 2, 18-20 Cavenagh St Darwin</td>
<td>08 8999 5235</td>
<td>$11.00</td>
</tr>
<tr>
<td>QLD</td>
<td>Maritime Safety Queensland</td>
<td>MacArthur Ave East Pinkemba</td>
<td>07 3860 3500</td>
<td>$6.05</td>
</tr>
<tr>
<td>VIC</td>
<td>Marine Safety Victoria</td>
<td>PO Box 2797 Melbourne 3001</td>
<td>03 9655 3399</td>
<td>No charge</td>
</tr>
<tr>
<td>TAS</td>
<td>Marine and Safety Tasmania</td>
<td>Level 1, 7-9 Franklin Wharf Hobart</td>
<td>03 6233 8801</td>
<td>$4.40</td>
</tr>
<tr>
<td>SA</td>
<td>Transport South Australia</td>
<td>Kateena Street Regency Park</td>
<td>08 8348 9506</td>
<td>No charge</td>
</tr>
</tbody>
</table>

These books include personal details such as name and address, date and place of birth, description such as hair and eye colour and height and have a passport size photo as well. Each voyage is filled out by the Master and includes details of the ship, details of operation and service and signatures of authority.
On arrival at the ship

On arrival at the ship, your first task should be to find the Master and Chief Officer and introduce yourself. The Master will most likely ask for your passport. This is needed for your name to be added to the crew list for customs and immigration purposes. On handing your passport to the Master, you formally come under his command.

The Chief Officer or someone he nominates will show you to your cabin and briefly explain meal, laundry and other housekeeping arrangements.

Ideally, you should join the ship well before the start of loading, go through the load plan with the Master and Chief Officer, and ensure that all necessary preparations are completed prior to loading. Unfortunately, this is not always possible, as loading is often scheduled to start as soon as AMSA and quarantine clearances have been obtained. Arrival in port is a busy time for the Master and Chief Officer, so they may not be able to spend much uninterrupted time with you.

Try to fit into the ship’s routine as soon as possible. Get into working clothes and find your way around the ship. Make yourself familiar with the load plan, the number of each class of livestock to be loaded and where they will be located on the ship. Familiarize yourself with the feeding and watering systems on the ship. Check the veterinary kit on board – once the ship has put to sea it is too late to get extra drugs or equipment.

The ship is more than a workplace – it is also home for the crew. Find out and respect the shipboard routine and any local conventions, such as where to leave dirty clothes and boots, times when the senior officers are asleep and procedures in the mess. Find out meal times and your seat at the meal table. The officers generally sit at the same place for each meal, and sitting in somebody else’s place can cause embarrassment. Breakfast is generally an informal meal, but on some vessels the mid-day and/or evening meals are quite formal. Find out the appropriate dress for each meal.
Management on board

It is important to understand the working relationship between the ship’s officers, crew, ship owner, exporter and importer.

Seniority on the ship is as follows:

- Master (Captain or ‘Old Man’)
- Chief Officer (First Officer) / Chief Engineer
- Second Officer / Second Engineer
- Third Officer / Third Engineer
- Bosun (Tindal)
- Able seamen
- Ordinary seamen / stockmen

The Master has overall responsibility for management of the ship. He is the point of contact on the ship for the ship’s owners, exporter, importer, and port authorities. The Master receives his instructions from the ship’s owners, who in turn receive their instructions from the exporter or importer chartering the ship. Whilst at sea the Master has supreme authority and his word is final.

The Master has prime responsibility for ship safety, emergency preparedness and navigation. He has a broad ‘human resource management’ responsibility; to ensure good morale and team spirit, with any staff issues that may affect efficient operation of the ship promptly resolved. The Master directly oversees the activities of the senior officers on board and is their professional mentor.

The Master prepares the documentation required on arrival. He is also responsible for overcoming ‘restraints’ at discharge, caused by corrupt, inefficient or overzealous officials – the ship’s pilot, port authority, customs, veterinary authorities etc.

Whilst in port, the Master hosts a steady stream of people visiting the ship – customs, quarantine, port authority, exporters, importers, inspecting vets and agents of every description.

The Chief Officer is responsible for day to day management of the livestock cargo. He is the operations manager for all livestock matters. Depending on the ship, the Chief Officer may or may not have a watch on the bridge. On larger ships, there is enough livestock work to keep the Chief Officer occupied full-time, with an additional junior officer on board to keep watch. On smaller ships, the Chief Officer may have a watch on the bridge in addition to his livestock duties.

The Second and Third Officers are assigned to watch-keeping duties at sea and have little to do with livestock management, except to understudy the Chief Officer. However, whilst the ship is in port, the Second and Third Officers are rostered for other duties, including supervision of loading and discharge.
The Chief Engineer, Second Engineer and Third Engineer work in the engine room and on specific engineering and maintenance tasks, and have little if anything to do with the livestock on board.

The Bosun is the foreman of the crew. He has come up through the ranks as a seaman and has invariably spent a lifetime at sea, with many years experience on livestock ships.

The fitter. There is often, but not always, a specialist ‘fitter’ on board. He is responsible for day-to-day maintenance in the livestock house, such as plumbing and electrical repairs and minor welding.

The stockmen on board are typically young, fit men from the Philippines, Bangladesh or Pakistan. Most have no formal trade skills and a limited command of English. They learn their trade as a stockman on board the ship, and can develop quite astute stock handling skills. Many have great empathy with the animals in their care. The stockmen are accustomed to working hard and doing what they are told, and are generally good team players – if not, they don’t stay on the ship for long. There is usually a good sense of camaraderie in the crew.

As the specialist stockman or veterinarian on board you must develop a relationship of professional respect and understanding with the officers, especially the Master and Chief Officer, so the technical advice you offer is more readily accepted. You must also establish a rapport with the Chief Officer, bosun and crew, so that the tasks you want implemented are willingly done.

Your interpersonal skills and ability to work in a cross-cultural environment are every bit as important as your technical expertise.
Export preparation—sheep and goats

Exporters must comply with four different sets of requirements when preparing sheep and goats for export:

- The importing country’s protocol.
- The *Australian Standards for the Export of Livestock*.
- Additional market-specific requirements in Australia.
- Commercial requirements in the contract of sale.

Importing country protocol

The importing country protocol sets out the requirements for stock to be allowed into the destination country. Protocols vary from one importing country to another. For slaughter stock there is always a requirement that the sheep and/or goats are inspected prior to loading and found to be healthy. That may be all that is required. However, there may be extra requirements – such as anthrax vaccination for sheep or a ban on the export of ewes. The Australian Health Certificate provided by AQIS is accepted as evidence that the importing country’s requirements have been met.

Australian Standards for the Export of Livestock (ASEL)

These are Australian requirements that set out minimum standards of husbandry for livestock exported from Australia. They cover livestock management throughout the export chain - selection on-farm, export preparation, loading, shipboard management and reporting.

The ASEL requirements which have a direct impact on shipboard husbandry include:

- Minimum weights for sheep and goats exported by sea.
- Pregnancy testing of ewes and goat does.
- A minimum pen area per head, based on bodyweight, with stocking density tables, for November to April (the Middle East winter) and May to October (the Middle East summer).
- Feed and water to be provided to all sheep and goats within twelve hours of being loaded on the ship.
- Sufficient feed and water on the ship at the time of departure for anticipated needs during the voyage, plus an additional 25% or three days (whichever is less) to allow for delays.
- Written instructions to the Master which include the quantity of feed and water to be provided to each class of stock, treatment required during the voyage, the authority to destroy seriously ill or injured animals, and procedures for contacting the exporter in an emergency.
- A minimum shipboard veterinary kit to be on board.
It is important that you have a copy of the *Australian Standards for the Export of Livestock* and are familiar with them. They can be downloaded from the AFFA website at [http://www.daff.gov.au/animal-plant-health/welfare/export-trade/v2-1](http://www.daff.gov.au/animal-plant-health/welfare/export-trade/v2-1).

**Additional market-specific requirements**

For some particular markets, there are additional Australian requirements, beyond those in *ASEL*, deemed necessary to protect the market. A good example is with sheep and goat exports to Saudi Arabia, where additional requirements apply because of the sensitive nature of the market.

**Consignment risk management plan**

Before starting to prepare an export consignment, the exporter is required to provide AQIS with a consignment risk management plan (CRMP). This sets out how the exporter proposes to meet the importing country’s protocol, the *Australian Standards for the Export of Livestock*, and any additional market-specific requirements. For exports to the Middle East, the exporter is also required to demonstrate there is a low risk of a heat stress incident, using a heat stress computer model designed specifically for this purpose. The model takes into account the design and ventilation on the vessel, the type and bodyweight of livestock on board, and the time of year and route that will be taken by the vessel.

**Commercial requirements**

Commercial requirements in the contract of sale, such as minimum weights, breed, sex etc must obviously be complied with as well.

**Final inspection**

All sheep and goats exported from Australia are inspected for fitness to travel during the 24 hours prior to loading. This final inspection may be done at the export feedlot or on the wharf immediately prior to loading.

The final inspection is done by inspectors working under the direction of an AQIS accredited veterinarian. Rejection criteria include lameness, pinkeye, scabby mouth, acute scouring, inanition, emaciation, a deep laceration, discharging abscess, flystrike, physical weakness, respiratory difficulty, generalised dermo and/or an abnormal swelling or growth.

Sheep and goats should only be loaded on the vessel if they meet commercial specifications, plus all importing country protocol and Australian requirements, and they have been inspected prior to loading and found to be ‘fit to travel’.
Sheep and goat exports to Saudi Arabia

Saudi Arabia was Australia’s largest live sheep export market during the 1980s, taking more than two million sheep per year. They were mostly full-mouth, heavy wethers.

In late 1989 and early 1990, several consignments of Australian sheep were rejected on arrival in Saudi Arabia. Sheep quality and disease were central issues of dispute. Australia’s reputation as a supplier of live sheep was damaged in other markets and there was strong pressure from the animal welfare lobby in Australia to close the live export trade. To avoid further damage to the trade, live sheep exports to Saudi Arabia were banned in 1990.

An attempt to resume live sheep exports to Saudi Arabia in 1995 failed when the first shipment was rejected on arrival because of scabby mouth, which had spread through the consignment whilst at sea.

The Saudi live export trade resumed in 2000, initially with trial shipments and later on a commercial basis. Live sheep exports to Saudi Arabia increased rapidly; with live goat and cattle exports following in the wake of the expanding live sheep trade. Saudi Arabia was once again our largest live sheep export market, both in numbers of sheep exported and their value. However, in August 2003 the Saudi trade came to a grinding halt with rejection of a consignment of 57,000 sheep on the Cormo Express. This incident attracted international media attention and seriously threatened the entire live sheep export trade.

In May 2005, the Australian and Saudi Arabian governments signed a Memorandum of Understanding (MOU) regarding the live export trade. The MOU sets out Saudi requirements for livestock imported from Australia. It also provides a mechanism for dispute resolution, and a guarantee that livestock will be discharged into quarantine facilities in Saudi Arabia pending resolution of any dispute.

In July 2005 the Australian government passed legislation allowing a resumption of the live export trade to Saudi Arabia. However, sheep and goats must be specially prepared for export to Saudi Arabia. Some of the extra requirements for export to Saudi Arabia are listed below.
Scabby mouth vaccination

All sheep and goats exported to Saudi Arabia must be vaccinated against scabby mouth, twice. The first vaccination is done by the Australian sheep producer, generally at marking, though it can be done later. The second vaccination must be done by an accredited vaccinator, and there must be at least 14 days between the first and second vaccinations. The second vaccination must be within 56 days of export.

The scabby mouth vaccinations applied by accredited vaccinators must be given to sheep on the bare skin under the front leg and to goats on the bare skin beneath the tail. You should be able to find vaccination ‘takes’ or scars on most of the sheep and goats in a Saudi shipment.

Mouthing

Sheep and goats exported to Saudi Arabia must be mouthed by an accredited vaccinator. This is done on-farm when the second scabby mouth vaccination is applied and the Saudi eartag is inserted.

Unless a special dispensation is provided by the Saudi Ministry of Agriculture, sheep and goats must have no more than four permanent incisor teeth in wear at the time of their second scabby mouth vaccination. Sheep and goats with the 5/6 incisor teeth erupting but not yet touching the dental pad are eligible for export to Saudi Arabia. Animals with six permanent incisor teeth touching the dental pad are not eligible.

Saudi eartags

All sheep and goats exported to Saudi Arabia must be tagged with a Saudi eartag at the time of mouthing and vaccination on-farm. Saudi eartags are wrap-around flexitags, coloured red and stamped with a unique two letter, five digit number. A Saudi eartag indicates that the animal has been mouthed and vaccinated by an accredited vaccinator. It is the ‘boarding pass’ to Saudi Arabia. It is also the prime means of accountability, allowing traceback to the vaccinator and property of origin.

Vendor and vaccinator declarations

Declarations signed by the vendor and vaccinator are required for all sheep and goats exported to Saudi Arabia. These strengthen legal accountability. The declarations are subject to audit by AQIS.

Feral goats

Trapped feral goats are banned from export to Saudi Arabia. Only farmed goats (born behind wire and reared since birth) are allowed. They must be accustomed to eating and drinking from troughs and to human contact prior to export.
Loading

When a livestock ship arrives at an Australian port from overseas, it must first receive an AQIS quarantine clearance. This inspection is to reduce the risk of an exotic disease (particularly sheep pox and foot and mouth disease) entering Australia. Most sheep ships return to Australia spotlessly clean after two weeks of washing down whilst on the way back empty. If cleanliness is not up to scratch, the ship may be ordered out to sea to clean up before presenting for another quarantine inspection.

The ship must also get approval from an Australian Maritime Safety Authority (AMSA) marine surveyor prior to loading. AMSA is the statutory body responsible for safety at sea.

The AMSA requirements for livestock ships are listed in Marine Orders Part 43. The marine surveyor may require that deficiencies are fixed prior to loading, or may issue an order requiring work to be done before the ship returns to Australia for its next load.

The load plan prepared by the Chief Officer (in consultation with the Master, exporter and Australian stockman) gives the order of loading and location on the ship where each group of animals will be penned. The load plan should take into account the best location on the ship for each group of animals, the pen area required by each group of animals, order of discharge, speed of loading and stability of the ship.

The exporter should appoint a ‘Welfare Officer’ with responsibility for ensuring that loading facilities and animal welfare standards on the wharf are satisfactory. The Chief Officer and Australian stockman have a similar role on the ship. Ramps should have a non-slip floor and be periodically inspected for any protrusions, sharp edges or gaps that may cause injury or allow escape.
At the time of loading, sheep and goats are penned according to the load plan, which is based on estimated numbers and bodyweights. Where necessary, adjustments are made during the first day at sea.

Special consideration should be given to penning arrangements for particular classes of sheep and goats.

- Sheep in wool tend not to travel as well as freshly shorn sheep, especially during the Middle East summer months. They should be given extra space and penned in a cooler, better ventilated part of the ship.
- Heavy wethers and heavy rams (>60kg) also find very hot, humid weather tough going, and during the Middle East summer months should be given extra space and penned in a cooler, better ventilated part of the ship.
- With horned rams and goats with large horns, access to feed and water troughs can be a problem. Some pens may not be suitable for animals with large horns, because there is not enough space between the pen rails for their heads to get through for feed and water. In this case, it may be necessary to put the feed and water troughs within the pen (though this has problems of its own, with fouling of the troughs and difficulty for the crew cleaning the troughs and feeding out).
- Small lambs can have problems getting access to troughs that are mounted at a height for mature wethers. The troughs may need to be lowered, or secured at ground level within the pen.
- Pen security is also an issue for lambs and small goats, which can readily escape through the rails. The use of upper tier pens improves pen security, but makes monitoring and inspection at sea more difficult.

In most instances it is better not to feed out or provide water whilst loading is in progress. The ship’s crew are busy penning up, and auger noise can disrupt stock movement on the vessel. However, you must ensure that all sheep and goats loaded on a vessel have water at the end of the day, and that feed is provided to all stock within twelve hours of loading.

At the completion of loading, the AQIS certifying vet, AQIS accredited vet, Master and exporter generally meet in the Master’s cabin or officer’s mess to finalise documentation.

The exporter must demonstrate that stocking density requirements are met and there is sufficient feed and water on board.

The AQIS certifying vet provides the exporter with a set of signed and stamped Australian health certificates and a Permit to Export the shipment. On receipt of this paperwork the ship is able to sail. In most cases the ship puts to sea within a couple of hours of obtaining the Permit to Export.
Typical daily routine at sea

Each ship has a daily routine, which the Chief Officer will outline to you. A typical daily routine at sea is as follows:

0630–0700  Crew breakfast

0700–0930  The crew feed and water stock and remove any dead animals from their pens.

The Chief Officer and Australian stockman supervise feeding and watering. Any maintenance required to feeding and watering systems or penning is done immediately if urgent, or otherwise noted for repair later in the day.

The hospital pens are inspected and an assessment is made of any treatments required.

The crew are busy feeding and watering and there is limited labour available for stock handling or other work.

0930–1000  Morning break.

Daily mortality data is collated by the Chief Officer. Work priorities and requirements are discussed with the Chief Officer and the work program for the rest of the day is agreed.

1000–1200  Some of the crew continue feeding and watering. Other crew members are released for other work.

The pens are systematically inspected with shy feeders, animals that are ill and scabby mouth suspects moved to hospital pens. Animals in the hospital pens are treated.

The daily (noon) report is prepared in consultation with the Master.

1200–1300  Lunch break.

1300–1530  Feeding, watering and stock work continues as necessary. Routine maintenance is carried out.

1530–1600  Afternoon break.

1600–1730  Complete daily work. Final inspection of stock. Ensure everything is ready for the following day. Clean up. Laundry. Write up diary.

1800–1900  Evening meal.
First day at sea

On the first day at sea the crew normally goes through the entire consignment and, where necessary, adjusts pen stocking densities. Pens should also be nominated as hospital pens for sick or injured animals and as recovery areas for sheep and goats that are non-competitive in the normal pen environment.

As non-competitive sheep and goats (‘skinnies’) are identified, they should be moved from their pens to a designated recovery area. This process should start on the first day, and continue until the ship is a couple of days away from its destination. Animals that are non-competitive in the normal pen environment often do quite well in a pen with other less competitive sheep and goats, at a reduced stocking density and with feed available ad-lib.

However, it is important not to stress other sheep or goats on the ship trying to catch and remove those that are struggling. Handling and disturbance should be kept to a minimum.

Establish a routine that includes inspection of each pen on the ship at least once each day. You should endeavour to pre-empt problems and where possible take action to minimise the impact on stock health and welfare.

Good working relationships with the Chief Officer and bosun are essential. A good working relationship and communication with the crew is also important. Some of the stock crew have many years experience working on livestock ships. If you get on well with the crew, they will bring matters of concern to your attention.

Livestock carriers, especially older vessels, require an enormous amount of maintenance. The build-up of dung during the voyage and pressure hosing with sea water on the way back causes corrosion and wreaks havoc with electrical systems. Augers, pumps, pipes, taps and the like need regular repair. You need to keep a constant watch for mechanical and electrical problems that may disrupt feed and water supply or cause other difficulties. At times it may be necessary to swap labour around and manually feed or water stock whilst repairs are completed.

A stroll around the stock house during the hour before the stockmen start work can be very informative. You can see the sheep and goats at rest, what feed remains in the troughs, and the availability of water. Once activity begins in the stock house, it is not as easy to get a sense of how the stock are faring. Make an early morning walk around the stock on board part of your daily routine, starting on the first day.
Common health problems

The average mortality rate for sheep exported to the Middle East is about 0.8%, from loading in Australia to completion of discharge overseas. Most shipments have mortality rate in the range 0.2–1.4%. Very occasionally there is a bad voyage with a mortality rate over 1.5%. A mortality rate of 2.0% or more triggers a formal investigation by AQIS.

The mortality rate for domesticated goats is similar to that for sheep. Feral goats are prone to higher mortalities.

Although no two voyages are the same, the daily mortality rate generally starts low and increases late in the voyage.

Inanition and salmonellosis are the two main causes of sheep and goat deaths at sea. These two syndromes account for about 75% of all shipboard mortalities.

Inanition

Affected animals are ‘shy feeders’ that do not adjust to eating shipboard pellets. Some waste away and are obviously emaciated, but most look normal despite days of not eating and are difficult to diagnose before they die.

Young sheep, (up to and including four-tooth), have a stronger appetite drive and lower risk of inanition than older mature sheep.

The risk of inanition is greater in very fat sheep. It is also greater during the second half of the year, when the sheep’s metabolism is geared for weight gain on-farm, rather than rapid fat breakdown.

Affected animals will often eat good quality hay if it is available, but will simply not eat pellets. After a few days of not eating, disruption to the rumen flora becomes irretrievable. There is then no effective treatment.

Non-competitive sheep

These sheep will eat pellets, but are reluctant to push forward when feed is available, so they get little to eat. They tend not to die at sea, but steadily lose weight during the voyage to be discharged as poor sheep needing emergency slaughter.

Sheep that are non-competitive in the normal pen environment often do quite well in a pen with other less competitive sheep, at a reduced stocking density and with feed available ad-lib. They should be moved to designated recovery pens for the voyage, then returned to their original pens just prior to arrival.
Salmonellosis
Sheep with salmonellosis stop eating and become feverish and dull. They develop an acute scour that may contain strands of mucosa and blood, but is more often just a thin watery liquid. Death occurs within hours.

Treatment of clinical cases requires intensive fluid therapy, which is not practical on a large scale and has a low success rate anyway. Antibiotics are sometimes put in the drinking water of affected pens as a preventive measure. This makes the crew feel that they are doing something, but there is little evidence that blanket antibiotic treatment is of benefit, and compelling evidence that oral antibiotics disrupt the rumen flora in otherwise healthy sheep in the pen.

Given the acute nature of the disease and difficulties with treatment, the focus must be on prevention, with management to minimise stress and encourage eating. Sheep that are not eating well are especially vulnerable to salmonellosis.
Pinkeye

Pinkeye occurs in every shipment. It can be particularly bad if the export feedlot is very dusty, or the pellets being used either in the feedlot or at sea fragment easily, producing lots of ‘fines’.

After four or five days out to sea there may be hundreds of pinkeye cases on board, but most heal before arrival in the Middle East. The best treatment response occurs with an oil-based eye ointment, such as Orbenin or Opticlox. However, it is not practical to catch large numbers of sheep for individual treatment, and attempting to do so can be quite stressful on the pen as a whole. Aerosol can sprays are of limited value as the antibiotic soon washes out of the eye. Oxytetracycline powder dissolved in glycerine and sprayed into the eye with a backpack and wand is moderately effective, and can be done with minimal disturbance to the other animals in the pen. It is the treatment method of choice.
Most untreated sheep recover after two to three weeks - those with pinkeye early in the voyage are well on the way to recovery by the time of arrival in the Middle East. However, in a small proportion of cases the infection spreads deeply into the eye, causing long-term blindness. These animals are a pitiful sight and very difficult to handle at discharge.

Figure 5: An early case of pinkeye. The glassy surface of the eye has developed a blue haze and the eye is blind.

Figure 6: A severe case of pinkeye, with infection spread deep into the eye.

Figure 7: An eye which has almost recovered. The central grey area is all that remains of the pinkeye infection that started two weeks earlier.

Scabby mouth

When young sheep are mixed together, closely confined and fed coarse pellets in troughs, conditions are ideal for scabby mouth spread. There is a very high level of scabby mouth challenge in the live export system. Lambs and hoggets that are not vaccinated against scabby mouth are quite likely to develop the disease.

Affected sheep develop scabs near the corner of the mouth, and in severe cases over the lips, chin and nose. The disease runs its course in two to three weeks. The scabs drop off and affected sheep fully recover. Unfortunately, the prevalence and severity of disease on board ship are worst at about the time of arrival in the Middle East. It does not look good to arrive with large numbers of scabby mouth affected sheep.
Scabby mouth has caused concern in a number of our live export markets, especially in Saudi Arabia. However, the more widespread use of scabby mouth vaccine on-farm has greatly reduced the problem.

Sheep exported to Saudi Arabia are required to have two scabby mouth vaccinations, to ensure strong immunity and protection against the high challenge during export. Despite this, there are still odd cases of scabby mouth at sea in Saudi shipments, but the disease does not spread far and most cases are mild and heal rapidly.

A scoring system has been developed to record the severity of scabby mouth lesions. This should be used when assessing scabby mouth and reporting.

**Table 4. Scabby mouth lesion scores**

<table>
<thead>
<tr>
<th>Score 0</th>
<th>No evidence of scabby mouth.</th>
</tr>
</thead>
</table>
| Score 1 | A lesion that cannot be seen from a distance of 1 metre.  
*Note:* Typically an old scar or scab the size of a match-head that can only be seen by parting the lips and closely examining the mouth. |
| Score 2 | A lesion that can be seen from a distance of 1 metre but is less than the size of a 5 cent coin. |
| Score 3 | A lesion that can be seen from a distance of 1 metre and is the size of a 5 cent coin or bigger. |
As there is no effective treatment for scabby mouth, during the voyage, the disease should be allowed to simply run its course.

Goats can get scabby mouth, but they are much less susceptible than sheep – the scabs are usually not as severe, and healing is more rapid.

**Pneumonia**

Mainly seen in lambs, less common in hoggets and rare as a cause of death in older sheep. Diagnosis is relatively easy, with post-mortem examination. With an outbreak of pneumonia, try to reduce respiratory stress in affected pens – if possible spread the sheep or goats out and look at ways of improving ventilation. Antibiotics may help affected animals survive.

![Figure 10: Pneumonia.](image)
Hyperthermia

There is some heat stress with sheep panting on all voyages at the time of crossing the equator. However, hyperthermia deaths are only likely to occur in extreme conditions, when the wet bulb temperature in the stock house exceeds 30°C. Such conditions can occur in the Arabian Gulf, Arabian Sea and Red Sea during the Middle East summer.

With extreme weather conditions, large numbers of sheep and goats can die within hours. Affected animals pant rapidly as they try to blow off body heat.

If an animal is unable to get rid of the body heat it is generating, body temperature rises. Collapse and death soon follow.

The problem is obvious and an emergency response is needed. The Master may change direction of the ship to obtain maximum cross-ventilation of pens above deck. If there are portable fans on board, they should be set up to ventilate animals at greatest risk – rams, heavy wethers, sheep in wool, and stock in pens with restricted ventilation. It may be helpful to open pen gates and allow stock into the alleyways. Clearly, all non-essential work must stop and all available labour must be directed to helping stock survive.

Smothering

Smothering may occur if there is a disruption to feeding with intense competition at the feed trough when feed becomes available again. If there is disruption to feeding, for example following mechanical breakdown of the feeding system, feed should be put out pen at a time, with as many people as possible on hand to prevent a pile up and smothering.

Smothering can also occur with young sheep on restricted rations.

Foot abscess

A few cases of foot abscess can be expected during the voyage. They generally respond well to a hefty dose of antibiotics. Where infection has entered the foot through a toe crack, foot paring to allow drainage is also helpful.

Coccidiosis in goats

Coccidiosis can be a problem in goats. If there is uncontrolled scouring in goats, treatment with oral sulphadimidine in the water is recommended. However, a decision to give blanket antibiotic treatment should not be taken lightly, and it should be restricted to the pens with scouring and deaths. Whilst sulphadimidine may help control coccidiosis, it can also disrupt rumen function and increase the risk of salmonellosis.
Trauma

Expect a few injuries. Sheep or goats with a broken leg must be promptly and humanely destroyed. Lacerations and other soft tissue injuries may be amenable to antibiotic treatment and nursing care.

Miscellaneous other diseases

Expect a few other miscellaneous diseases such as urolithiasis, pizzle rot, lupinosis, pyrrolizidine alkaloid poisoning, pulpy kidney, white muscle disease and the like. Although of interest as diseases, these conditions account for a very small proportion of total mortalities.

Post-mortems at sea

The causes of sheep and goat deaths at sea are well known and there is little to be gained from doing lots of post-mortems. However, at times post-mortems are useful for investigating the unexpected.

A basic post-mortem procedure is as follows:

- Examine the animal externally
  - look for injury, foot abscess, pinkeye, pizzle rot etc
- Lay the animal on its left side
- Reflect the legs and skin on the right side
  - look for anything unusual under the skin – injury, bruising, cellulitis or jaundice
- Open the abdomen – most significant findings are seen here:
  - rumen; check the rumen solids content (best to strain and weigh until experienced) and papillae development (size varies with location, look at a standard site such as the anterior blind sac)
  - intestines; especially the caecum – check the intestinal wall and gut contents. Beware of passive congestion after death that may appear to be inflammation
  - mesenteric lymph nodes; check size and inflammation
  - liver; look for fatty change, scarring, gall bladder size
  - kidneys
  - spleen
- Open the chest. For a quick look, open the diaphragm, but if you want a more detailed look, cut the ribs and reflect the rib cage.
  - look for consolidation of the lungs and fibrinous pleurisy

Biological samples collected at sea cannot be brought into Australia without prior approval from AQIS.
Common post-mortem findings

Inanition
Characterised frequently by low rumen solids contents with much water of a pale dirty grey colour. Rumen papillae are small. Often, though not always, the gall bladder is full. The liver is often pale and friable. The intestinal contents are reduced and the caecum frequently contains a golden paste. Sometimes there is nephrosis, with the kidneys enlarged, pale and wet on cut section.

Salmonellosis
Gut contents are watery and usually the solids are reduced. There may be bloody contents in the abomasum (coffee coloured) and caecum/colon. The caecum is usually either large and fluid filled or very small and narrow, about 3 cm diameter. The mesenteric lymph nodes are usually enlarged and oedematous. The spleen may be enlarged and pulpy.

Note: Salmonellosis is the most common cause of death in the first week of the voyage and inanition in the last week. As inanition predisposes to salmonellosis, some sheep have evidence of both conditions.

Pneumonia
There is obvious lung consolidation. Pleurisy is often present.

Hyperthermia
Usually multiple sheep dead in a localised area. These animals autolyse rapidly, often with froth from the nostrils. They usually have a full rumen, petechial and ecchymotic haemorrhages around the body, rubbery lungs and a congested neck.

Smothering
The animal is found near (often under) the feed trough. There is a reasonable amount of feed in the rumen but little to see on post-mortem apart from pulmonary oedema, anterior congestion and possibly bruising on the neck.

Trauma
Broken limbs, deep lacerations, infected wounds, carcase bruising etc.

Acidosis
Rare with the low starch, high fibre pellets used by the trade. The rumen is full and the rumen fluid has a pH < 5 (You need pH paper). There may be a rumenitis. The rumen epithelium is easily removed (as it is with autolysed carcasses).

Miscellaneous
Expect about 20 per cent ‘unknowns.’
Goats

A few tips about goats.

Extra fibre

Goats are browsing animals, with a rumen accustomed to handling fibre. Pellets used in the live export trade contain adequate fibre, with up to 50% of straw and/or hay. However, the fibre in export pellets is finely ground and passes quickly through the rumen. Goats perform much better at sea if they have access to additional long fibre – preferably good quality hay, but chaff is OK provided it is cut long. About 20% of the total ration provided to goats should be hay or chaff. Hay can be fed out every second day. Alternatively, if chaff is provided, bags can be slit open and left within the pens for the goats to help themselves.

Dominance behaviour

Goat bucks of feral origin are territorial and exhibit strong dominance behaviour when closely confined with other bucks. There may be endless mounting of one another. Smaller, subservient goats can sustain injuries from being ridden and rectal bleeding from repeated sexual molestation. In a climate of continual bullying, smaller goats are less likely to eat and drink properly and more susceptible to stress related diseases.

It is important to draft feral type goat bucks by size, with a liveweight range in each line of no more than 10kg. Having goat bucks in relatively even lines helps reduce dominance behaviour.

It is also important to provide a refuge for subservient animals. Goats with blood stains around the rectum, chronic rub marks on the back, or seen to be repeatedly mounted should be placed in a secure refuge pen to recover.

Single-tier pens

Goats seem to travel better in single tier pens, with lots of headroom. Low headroom is a spatial stressor, especially for goats with large horns. Where possible, such goats should be housed in single-tier pens.
Responsible drug use

The slaughter sheep and goats exported from Australia are food animals. Most are killed soon after arrival overseas, and go directly into the human food chain. We must be mindful of this and particularly careful when using veterinary drugs to ensure that all treatments given are necessary and appropriate. Our markets are becoming more sophisticated, with residue testing of meat randomly carried out in some of our customer countries. Food safety is a sensitive issue. The last thing the live export trade needs is bad publicity from a drug residue incident.

Fortunately, on most voyages there is little need to treat live export sheep and goats with veterinary drugs. Drug use is much less than with live export cattle.

Availability

On arrival at the ship, you should check that the veterinary kit on board is adequate. Minimum requirements are set out in the *Australian Standards for the Export of Livestock* (A4.1.8). Once the ship sails, it is too late to get missing items.

Just before leaving the ship, prepare an inventory of the drugs and veterinary equipment on board, plus a list of items that need to be replaced, and give this to the Master. If your lists are faxed to Australia in advance, items required for the next voyage can be ready when the ship returns.

Storage

Make sure the drugs on board are stored in accordance with the manufacturer’s recommendations. These are generally shown on the side of the container. Some products, such as vaccines, need to be kept in the fridge. Others do not need to be refrigerated, but must be kept below a specified temperature, such less than 30°C. Such drugs can be kept in an air-conditioned room, but not in a deck locker where the temperature will exceed the recommended maximum.

Don’t use suspect drugs

Don’t use any drug that has passed the expiry date, is not in the original container, or looks contaminated or spoilt. Such drugs should be discarded.

Don’t use any drug you are not sure about; for example a drug that you have not heard about or seen before, or with label instructions in Arabic or Chinese, that you cannot read.

Think before treatment

Before administering a treatment, consider the following:

- Is treatment really necessary?
- Are there likely to be any adverse side effects?
- Will treated animals get an effective dose?
- Is there a shorter-acting alternative?
In the past, vast quantities of oxytetracycline powder have been given to sheep and goats at sea. Some exporters have required routine treatment on set days during the voyage. Others have required oxytetracycline treatment under specific circumstances, for example if the daily mortality rate exceeds a certain threshold.

Tens of thousands of dollars have been wasted putting oxytetracycline powder in the water as a blanket treatment. Worse still, it can induce adverse effects.

There are three major problems with blanket oral oxytetracycline treatment:

- Unless the ship has a header tank designed specifically for drug administration through the drinking water (most don’t), treatment is very hit and miss. If oxytetracycline powder or a pre-mix concentrate is added to individual troughs, the first animals to drink get many times the recommended dose, but the concentration of antibiotic gets progressively less with dilution as the trough re-fills, so the last animals to drink get very little, if any, antibiotic.

- The sick animals that need antibiotics are often not drinking much, and when they do drink, are the last to the trough. As a result, they don’t get much of the antibiotic put out.

- Oral antibiotics disrupt the bacterial flora in the rumen. Most strains of salmonella bacteria are now resistant to oxytetracycline. Treatment increases the risk of salmonellosis, by knocking out competing bacteria and allowing salmonella to grow more freely.

As a general rule, avoid blanket treatment with antibiotics. One exception is with an outbreak of pneumonia in young sheep. In this case antibiotics may be necessary to save severely affected animals, and putting oxytetracycline powder in the drinking water may be the only practical option.

Another exception is with coccidiosis in goats, where oral treatment with a sulpha drug may be useful.

Directions for Use

Needless to say, whenever veterinary drugs are used, it is important to follow the manufacturer’s directions for use. ‘Twice as much’ is never ‘twice as good’, but may have an adverse side effect or cause excessive residues in the carcase.
Humane destruction

Protecting animal welfare is an important responsibility for the Australian shipboard stockman and veterinarian. If an animal needs to be destroyed because it is seriously injured, sick or otherwise unsuitable for discharge, you must ensure that it is destroyed promptly and humanely. You must also ensure that moribund animals are not, under any circumstances, thrown overboard alive.

There are three acceptable ways of destroying sheep and goats at sea:

- captive bolt pistol, with a penetrating bolt
- bleeding, by cutting the carotid arteries
- anaesthetic overdose.

Captive bolt gun

A captive bolt pistol should be placed just behind the poll and aimed in the direction of the animal’s muzzle – as shown in the figure. Wait for the animal to stop moving its head before firing.

Bleeding

Bleeding out sheep and goats without pre-stunning is a humane method of slaughter provided it is done quickly and cleanly using a sharp knife.

Animals slaughtered this way die because the blood supply to the brain is cut off. Blood goes to the brain via the carotid arteries. There are two carotid arteries, one on each side of the neck, just above the windpipe. For a quick, humane death, both carotid arteries must be cut. The animal should be laid on its side, the head drawn back and the neck cut transversely through to the spine just behind the jawbone.

Carcase disposal

Be mindful of carcase disposal. Strictly follow the ship’s policy on opening carcases, and where carcases may or may not be thrown overboard.
Action in the event of a problem at sea

Although you may feel professionally isolated on the ship, help is not far away. If there is a sudden increase in mortalities, clinical disease is causing concern, something on the ship goes seriously awry, or you simply develop a sense that ‘things are wrong’ – don’t panic.

In the first instance, talk the problem through with the Master and Chief Officer - they have a wealth of practical experience managing livestock at sea.

For more serious and pressing issues that need an urgent response, the next line of support is the Australian exporter and the exporter’s vet. Peter Dundon (the MLA Manager Livestock Services in the Middle East based in Bahrain) is another valuable resource in a crisis. His contact details are listed below.

<table>
<thead>
<tr>
<th>Peter Dundon</th>
<th><a href="mailto:pdundon@mla.com.au">pdundon@mla.com.au</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Office phone</td>
<td>+973 1722 3003</td>
</tr>
<tr>
<td>Mobile</td>
<td>+973 3969 7002</td>
</tr>
<tr>
<td>Home</td>
<td>+973 1761 2094</td>
</tr>
<tr>
<td>Office fax</td>
<td>+973 1722 5394</td>
</tr>
</tbody>
</table>

You will not be blamed if something goes wrong during the voyage. You may, however, be criticised for failing to notify the problem, seek advice or take appropriate action. The live export trade is a sensitive trade that is too important to put at risk. If you are faced with a problem and don’t know what to do, get on the phone or write a brief summary of the problem and put it on the fax.

Use of the ship’s satellite phone/fax at sea

The ships that export sheep and goats from Australia are all equipped with a satellite phone and fax machine. However, call costs are very expensive – typically about US$6.00 per minute. If you need to get help, don’t hesitate to send a fax or use the phone (but be mindful of the costs and keep call time to a minimum). Calls relating to management of the stock on board are a legitimate business expense that should be borne by your employer.

Personal phone calls may well be charged to you at the end of the voyage. Beware of the costs involved; a few phone calls home can run up a phone bill that is several hundred dollars.
The day before arrival

A day or so before arrival you should confirm arrangements for your flight home. The time of arrival at the destination port will be known, and from that an approximate time when you can sign off the ship. If you have not done so already, ask the Master to contact the ship’s agents and make tentative airline bookings. Unfortunately, delays on arrival are not uncommon. You should allow at least one day for completion of arrival formalities and discharge, and be prepared to change flights at the last minute if there are unforeseen delays.

The day before arrival you should make a final detailed examination of all sheep and goats in the hospital pens. Any animals that are seriously ill or injured and are unsuitable for discharge should be humanely destroyed. It should not be necessary to slaughter large numbers of animals. However, regardless of the number involved, make sure the Chief Officer and Master are aware of and comfortable with your assessment before destroying any stock. Animals in the hospital pens that are suitable for discharge should be blended back into the pens they originally came from.

You should provide the Master with an inventory of the veterinary stores remaining on board, which can be faxed to the exporter or charterer for the next voyage.

During the last few hours before coming alongside, the Chief Officer will arrange a final clean-up, with equipment locked away, passageways swept etc, so the ship arrives looking as clean and tidy as possible.

You should ensure that all ramps, gates, panels etc needed for a smooth discharge are in the right place and in good operating order.
Discharge

When the ship ties up along the wharf there are initial formalities for the Master. Customs, immigration and port formalities could be completed within half an hour, but they might take several hours, especially on Fridays (the Middle East weekend) and during Ramadan and religious holidays.

What happens next depends on the country and port of discharge. A government vet from the importing country always comes aboard, to inspect the Australian health certificate and the cargo. Inspection of the sheep and goats on board may be a cursory five minute walk around, or may take an hour or more with a detailed inspection of each deck.

Approval to discharge may not be given on the spot. Instead, the inspection team may retire to consider their findings. A period of waiting and uncertainty may follow.

Once approval to discharge is granted, trucks usually appear, and things happen more quickly. Be ready to start discharging at short notice.

Discharge in the Middle East can be frustrating, with cultural and religious differences, technical and language barriers and unexplained delays. You must remain calm, civil and cooperative at all times. It is not your job to tell importing country officials how to run their country, or the importer how to run his business. Your job is to ensure that discharge proceeds as smoothly as the system will allow, with the least possible amount of stress on the sheep and goats in your care.
Record keeping and reporting

Personal diary
Throughout the voyage, you should keep a personal diary that records the events of the day:

- Weather and sea conditions.
- Mortalities by class of stock and by deck
- Your work activities for the day.
- Key events – such as breakdown of critical equipment, receipt of instructions from the exporter or Master etc.

If there is a problem late in the voyage, it can be difficult to remember exactly how events unfolded two weeks earlier. Your diary is there as a permanent record and prompt. It is for your personal use only.

Daily report
AQIS requires a daily report from the shipboard veterinarian, or shipboard stockman if there is not a veterinarian on board. The format for this report is included in this Handbook as Appendix D. It is a brief situation report, which should be given to the Master to include in his noon report.

As the specialist stockman or veterinarian on board, you are the exporter’s eyes and ears on stock husbandry matters. The exporter needs to know how the consignment is progressing during the voyage, and should get a good feel for the situation on board from comments in the daily reports.

Incident report
In the event of a major incident involving the stock on board, or pressing issue of serious concern, you should advise the exporter immediately, by the most expedient means – phone, fax, email, or a combination of these methods. This is a confidential report to the exporter and must not go anywhere else. If there is a need to pass information on to others, that is the exporter’s responsibility.

*If, at any time during the voyage you are seriously concerned about the health or welfare of the livestock on board, you should provide a separate incident report.*
End-of-voyage report

A final report must be submitted within five days of discharge. It gives you an opportunity to provide feedback about the voyage and flag ways to enhance future shipments. Your comments should include significant events, issues or situations that occurred during loading, at sea or on arrival.

The format for voyage reports is attached as Appendix E.

When writing your voyage report, try to be objective and factual and avoid emotive or colourful language. Whilst it is important to report where things have gone wrong, positive feedback is also helpful, so don’t forget to note a job done well.

Your voyage report should be sent to the exporter, who will forward the report to AQIS.
Returning home

An agent normally comes on board with your air ticket. He may take you to a hotel or the airport, or make arrangements for someone else to pick you up. You may have only a few moments notice to grab your bags and get in a car on the wharf.

You must of course say farewell to the Master and Chief Officer. A thank you to the cook and steward are also in order. If the steward has looked after you well during the voyage, a small tip (A$20) is not out of place. It can make life much easier if you intend travelling on the same ship again soon afterwards.

On return to Australia, your clothing and boots will be regarded as a quarantine risk and may be retained for disinfection. Try to have as much clothing as possible freshly laundered when you leave the ship. If you are likely to travel on the ship again for its next voyage, your work clothes and boots can be left on board. You should also consider giving your work boots to one of the stockmen. They appreciate such thought, and once again, some goodwill with the crew goes a long way on your next voyage. If you bring your work boots home, they must be cleaned meticulously before arriving in Australia.

Have some small US$ notes handy when you leave the ship. These may be needed for a taxi, tipping a porter, a drink, airport taxes or whatever. US dollars are accepted universally. Australian dollars may not be accepted.

Keep your bags locked whilst in port and once you leave the ship. This reduces the risk of theft.

The Middle East is a relatively secure place. There is more chance of being mugged in parts of Sydney or Melbourne than in any of the Arabian Gulf countries. Nevertheless, common sense is needed. Keep important possessions such as your wallet, passport and valuables with you at all times, preferably in a waist belt. Don’t keep all of your money in one place.

There are some wonderful places to visit in the Middle East – Petra, the Crusader Castles and Roman ruins in Jordan, the Pyramids in Egypt, the old souks in Jeddah and Muscat, buzzing cosmopolitan Dubai …. and much more. You have a unique opportunity to see these places and absorb some of the fascinating history and culture of the region. Take full advantage of the opportunities on offer.

On returning to Australia, make sure the quarantine declaration is filled in correctly.
Appendix A: Personal check list

Work clothes

Work boots

Casual clothes

Toiletries

Thongs

Torch, pocket knife

Note book, diary

Camera

This manual

The *Australian Standards for the Export of Livestock* and this manual

Lonely Planet Guidebook

Money/credit card

Passport

Books

Mobile phone with international roam

A suitcase or kitbag that can be locked and a small padlock for each bag

Notes:

For most of the voyage you will need work clothes suitable for hot, humid conditions – shorts or lightweight cotton trousers and a short sleeve shirt are recommended. Take a pair of lightweight overalls that will project a clean professional image during discharge.

Most shipboard stockmen and veterinarians use elastic-sided work boots and thick absorbent socks. Rubber boots are too heavy during hot humid weather when your socks quickly become saturated with sweat. However, if there are also cattle on board, rubber boots may be needed for working in cattle pens where there can be dung several inches deep.

Take sunscreen, some anti-fungal cream and some anti-inflammatory skin cream. Fungal skin infections and rashes are very common.

There will be plenty of private time available in the evening. Take a supply of books to enjoy during quiet moments.
Appendix B: Emergency contacts

Exporter / importer

After leaving the ship, should you get into any difficulty in the Middle East, try to contact the Australian exporter or their local agents. The importer may be able to help you, but do not depend on this.

MLA Bahrain

The MLA office in Bahrain is another source of help in a personal crisis. The primary purpose of the MLA office in Bahrain is to provide marketing and technical support to Australia’s meat and livestock customers in the Middle East. However, over the years MLA has also helped a number of Australians in distress. MLA has an excellent network of contacts throughout the region, who can be called on in an emergency.

<table>
<thead>
<tr>
<th>MLA Office</th>
<th>Phone Fax Address</th>
<th>+973 1722 3003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian Ross (Regional Manager)</td>
<td>Mobile</td>
<td>+973 3969 9154</td>
</tr>
<tr>
<td>Peter Dundon (Manager Livestock Services)</td>
<td>Mobile</td>
<td>+973 3969 7002</td>
</tr>
</tbody>
</table>

The MLA office is open during Bahrain business hours – 7:30 am to 3:00 pm Sunday to Thursday. Outside these hours and on public holidays there is an answer machine connected. Ian Ross and Peter Dundon may be contacted by mobile at most times, but they both travel extensively and could be anywhere in the Middle East or Australia. Peter has said that contact by stockmen or vets is most welcome at any time.

Australian Embassies

Australian Embassies provide consular assistance to Australians in distress overseas. Contact details for Australian Embassies in the Middle East are listed below.

<table>
<thead>
<tr>
<th>Embassy</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>+ 20 2 575 0444 (Cairo)</td>
</tr>
<tr>
<td>Jordan</td>
<td>+ 962 6 580 7000 (Amman)</td>
</tr>
<tr>
<td>Israel</td>
<td>+ 972 3 695 0451 (Tel Aviv)</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>+ 966 1 488 7788 (Riyadh)</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>+ 971 2 634 6100 (Abu Dhabi)</td>
</tr>
<tr>
<td>Kuwait</td>
<td>+ 965 232 2422 (Kuwait City)</td>
</tr>
</tbody>
</table>
## Appendix C: Live export terminology

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFFA</strong></td>
<td>Agriculture, Fisheries and Forestry Australia is the Federal Government Department responsible for agriculture.</td>
</tr>
<tr>
<td><strong>ALEC</strong></td>
<td>The Australian Livestock Exporters’ Council is the peak body that represents exporters’ interests.</td>
</tr>
<tr>
<td><strong>AMSA</strong></td>
<td>The Australian Maritime Safety Authority is the Federal authority with regulatory responsibility for the safety of vessels, crew and cargo at sea.</td>
</tr>
<tr>
<td><strong>AQIS</strong></td>
<td>The Australian Quarantine and Inspection Service is a branch of AFFA. It is responsible for quarantine inspection of vessels on arrival in Australia, and issuing the Australian health certificate and permit to export livestock.</td>
</tr>
<tr>
<td><strong>ASEL</strong></td>
<td>The <em>Australian Standards for the Export of Livestock</em></td>
</tr>
<tr>
<td><strong>CRMP</strong></td>
<td>Consignment risk management plan, which must be approved by AQIS prior to starting to prepare livestock for export.</td>
</tr>
<tr>
<td><strong>LiveCorp</strong></td>
<td>LiveCorp is a company set up by ALEC to conduct business on behalf of livestock exporters.</td>
</tr>
<tr>
<td><strong>MO43</strong></td>
<td>Marine Orders Part 43 are the AMSA regulations that apply to livestock exports.</td>
</tr>
<tr>
<td><strong>MLA</strong></td>
<td>Meat and Livestock Australia commissions research and development and provides technical and market support for Australia’s sheep and cattle producers.</td>
</tr>
</tbody>
</table>
Appendix D: Daily report

Commencing on day one (1) of the voyage, the report must include the following -

1. Dry bulb temperature and humidity
   • One average recording for each deck, each day
   • Bridge temperature (ambient)

2. Wet bulb reading – per deck

3. Feed consumption – average per head

4. Water consumption – average per head

5. Health issues – Sick pen report including medication and treatments

6. Respiratory character
   • 1 = normal
   • 2 = panting
   • 3 = gasping

7. Issues from daily meeting

8. Mortality and causes

<table>
<thead>
<tr>
<th>Port of Loading</th>
<th>Eg Portland</th>
<th>Eg Fremantle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mortality | Euthanasia | Natural Causes |
---|------------|---------------|
Daily | | |
Cumulative | | |

9. General Comments

Veterinarian ................
Stockman ....................
Vessel.........................
Date ..............Day No*…
Vessel's position and ETA at next port .................
Example of actual daily report transmission

Vet – Dr Fred Bloggs
Stockman – Joe Blow
Vessel – MV Bopeep Express
1.12.2008, Day 14
ETA 3.12.2008 at Jebel Ali, UAE

<table>
<thead>
<tr>
<th>Port of Loading</th>
<th>Portland</th>
<th>Adelaide</th>
<th>Fremantle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>36,571</td>
<td>24,665</td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td>450</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. DB - Deck 1=28°/75%, Deck 2=29°/77, Deck 3= 27°/72% .....
2. WB = 27°
3. Sheep and goats approx 1.1kg
4. Sheep and goats 4 litres
5. Four Sheep showing mild scabby mouth now isolated. Have also separated out 45 shy feeders.
6. All decks 1
7. Maintenance on watering system deck 4 proceeding
8. Mortality – 67 Total

<table>
<thead>
<tr>
<th>Mortality</th>
<th>Euthanasia</th>
<th>Natural Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Cumulative</td>
<td>12</td>
<td>55</td>
</tr>
</tbody>
</table>

9. All OK
Appendix E: End of voyage report

The end of voyage report must provide a general overview of the voyage, with mention of any specific issues relevant to the health and welfare of the livestock. The report must include the following information:

1. Vessel name
2. Voyage number
3. Departure port(s)
   • date
   • total livestock loaded, by species
4. Discharge port(s)
   • date
   • total livestock unloaded, by species
5. Feed and water
   • access
   • maintenance issues
6. Environmental conditions
   • weather
   • temperature
   • humidity
   • ventilation
   • decks / bedding
7. Health and welfare of livestock
8. Mortality
   • Total number euthanased
   • Total number that died from natural causes
9. Relationships with Master / crew / accredited stock person / veterinarian
10. Comments on discharge operations.
Appendix F: Maps

courtesy Microsoft Encarta)
## Appendix G: Insurance

### Certificate of Currency

<table>
<thead>
<tr>
<th>Policy Holder:</th>
<th>Australian Livestock Export Corporation Limited t/as Livecorp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Number:</td>
<td>93111068</td>
</tr>
<tr>
<td>Policy Class:</td>
<td>Corporate Travel</td>
</tr>
<tr>
<td>Sums Insured:</td>
<td></td>
</tr>
</tbody>
</table>

**Category B - Insured Persons:** **Stockmen**

### Coverage Section

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
<th>Sums Insured (each Insured Person)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 -</td>
<td><strong>Personal Injury</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If Spouse/Partner and Dependant Children are covered by the Policy,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>please refer below for the Sums Insured under Coverage Section 1.</td>
<td></td>
</tr>
<tr>
<td>Event 1 Death</td>
<td>7.50 x annual income to a maximum of</td>
<td>500,000</td>
</tr>
<tr>
<td>Event 2 Permanent Total Disablement</td>
<td>7.00 x annual income to a maximum of</td>
<td>500,000</td>
</tr>
<tr>
<td>Events 3 – 19 Other Permanent Disablement</td>
<td>7.00 x annual income to a maximum of</td>
<td>500,000</td>
</tr>
<tr>
<td>Event 20 Temporary Total Disablement</td>
<td>85.00 % of income to a maximum of</td>
<td>2,000 per week</td>
</tr>
<tr>
<td>Spouse/Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 1 Death</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>Event 2 Permanent Total Disablement</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>Events 3 – 19 Other Permanent Disablement</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>Event 20 Temporary Total Disablement</td>
<td>85.00 % of income to a maximum of</td>
<td>2,000 per week</td>
</tr>
<tr>
<td>Dependant Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 1 Death</td>
<td></td>
<td>20,000</td>
</tr>
<tr>
<td>Event 2 Permanent Total Disablement</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>Events 3 – 19 Other Permanent Disablement</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>Event 20 Temporary Total Disablement</td>
<td>Not Insured</td>
<td></td>
</tr>
</tbody>
</table>

| 2 -   | **Medical Expenses**                                                        | Unlimited                          |
| 3 -   | **Emergency Medical Evacuation**                                            | 1,000,000                          |
| 4 -   | **Repatriation of Mortal Remains**                                          | 50,000                             |
| 5 -   | **Cancellation / Curtailment / Additional Expenses**                        | Unlimited                          |
| 6 -   | **Personal Liability**                                                      | 10,000,000                         |
| 7 -   | **Luggage, Personal Effects, Travel Documents, Money & Credit Cards**      | 20,000                             |
|       | Specified Items:                                                            |                                    |
|       | Money and Credit Cards                                                      | 2,500                              |
|       | Portable Business Equipment                                                 | 10,000                             |
8 - Alternative Employee or Resumption of Assignment Expenses 10,000
9 - Rental Vehicle Collision Damage and Theft Excess Cover 5,000
10 - Missed Transport Connection 5,000
11 - Extra Territorial Workers Compensation:
   Weekly Benefits 500
   Common Law 500,000
12 - Kidnap, Ransom and Extortion
   Insuring Clause 1 250,000
   Insuring Clause 2 250,000
   Insuring Clause 3 250,000
13 - Political Evacuation and Natural Disaster Expenses 20,000
14 - Corporate Traveler’s Family Assistance Refer to Policy

AGGREGATE LIMIT:

Aggregate Limits of Liability:

Section 1 Personal Injury (i) Any one Accident or Occurrence $5,000,000
   (ii) Non Scheduled Air Travel
         Single-engine $1,000,000
         Multi-engine $1,000,000
         Helicopter $1,000,000
Section 11 Extra Territorial Workers Compensation: $1,000,000
Section 12 Kidnap-Ransom and Extortion: $1,000,000
Section 13 Political Evacuation and Natural Disaster Expenses: $100,000

DEDUCTIBLE AMOUNTS AND/OR EXCESS AMOUNTS:

Deductible and/or Excess Amounts:
Temporary Total Disablement Weekly Benefits - Injury 7 days
Portable Business Equipment $250 per claim

PERIOD:
From 4pm 30th day of September, 2007
To 4pm 31st day of October, 2008

Subject to the terms, conditions and exclusions of the Policy as issued.

13/12/2007
Dated

Signed for the Company