

Veterinary research highlights refocus for cattle export

March 6 2014, by Geoff Vivian



Ms Moore says as a result of this research, she says she is able to specify potential vaccinations and antibiotics to be used for Australian cattle. Credit: Richard Peat

Respiratory diseases are the greatest mortality risk for export cattle on long sea voyages according to PhD research by a local veterinary scientist.

"One of the most interesting findings was that [heat stress](#), which has been identified as the most important cause of death in the previous study that was carried out in late 2000, wasn't so much of an issue in the [cattle](#) anymore," Murdoch University's Jo Moore says.

She has also been working to develop regimes of prophylactic vaccination and antibiotics to prevent [respiratory diseases](#) and reduce mortality en route.

Ms Moore researched the cause of death for Australian cattle on 20 voyages.

She obtained tissue samples from all beasts that died at sea.

"All the voyages that go to the Middle East and Turkey [have a] biosecurity accredited vet on board," she says.

"They were asked to necropsy anything that dies and collect a set of samples."

She analysed these for any abnormal structural changes in the tissue, and to investigate the bacteria and viruses involved in the disease.

PCR ([polymerase chain reaction](#)) assays also helped identify any additional virus DNA.

"In the tissue sample ... if you get one that looks apparently normal you can still check and see whether it's got any viruses in there or something that might be present, and they haven't caused diseases yet but they might go on to cause disease," she says.

While a 2000 study identifying heat stress as the major cause of death resulted in new protocols that have largely eliminated it, she says

attempts to tackle respiratory diseases are less systematic.

"There is no standard vaccination or antibiotic protocol for live export cattle," she says.

"There are kind of two sets of treatments that the animals get.

"One is demanded by the importing country.

"[The exporters] were also treating them with antibiotics that are used on cattle with respiratory disease in the USA in feedlots ... based on whatever evidence they had."

However as a result of this research, she says she is able to specify potential vaccinations and antibiotics to be used for Australian cattle.

"We've got data for the first time on the bacteria and viruses involved in respiratory disease on long voyages.

"The idea is that we treat these cattle before they get on the boat to reduce the risk that they're going to die during the voyage or die once they get off the other end."

More information: "Mortality of live export cattle on long-haul voyages: pathologic changes and pathogens." Moore SJ, O'Dea MA, Perkins N, Barnes A, O'Hara AJ. *J Vet Diagn Invest*. 2014 Feb 11. [Epub ahead of print]

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