Issues and challenges transporting livestock to slaughter

Richard Wild
Ministry for Primary Industries

Introduction

Approximately 25 million cattle, sheep, deer, goats and pigs and several million poultry animals are transported to slaughter plants for processing into food annually in New Zealand. Cattle, sheep, deer, pigs and goats are processed at 58 meat export premises and 6 domestic abattoirs and poultry at a small number of poultry specific processing premises.

The red meat processing sector consists of several large corporate businesses that have processing plants strategically located up and down the country as well as a small number of smaller operators with a more regionalised focus. There are over 200 livestock transport companies facilitating the transport of livestock from farm to slaughter.

The Animal Welfare Act 1999 focuses on the obligations of the person in charge of animals to ensure their welfare. In regard to the livestock procurement supply chain, persons in charge of animals on farm can include the farm owner, farm manager, sharemilker, or farm worker depending on the circumstances. During transport the transport company operator and/or driver can be designated the person in charge, and when the animal(s) are accepted onto the slaughter/processing plant the processor becomes the person in charge.

The Transport within New Zealand Code of Welfare defines the minimum standards and recommended best practice for the transport of all animals including livestock. The Commercial Slaughter Code of Welfare defines the minimum standards and recommended best practice for commercial slaughter operators.

Ministry for Primary Industries, Verification Services (MPIVS) veterinarians are warranted inspectors under the Animal Welfare Act 1999, and they monitor compliance with New Zealand animal welfare standards and any overseas market access welfare standards. MPIVS veterinarians conduct antemortem inspection of live animals on arrival at export meat processing premises. The antemortem process includes assessing the welfare of the animals against standards under the Act, Regulations and Codes. Animal welfare cases will be graded, based on seriousness, documentary and photographic evidence will be collected and a veterinary report drafted.

The veterinarian will make a disposition on the case using the VADE model ie V=voluntary, A= assisted, D=directed, E=enforced. V and A cases typically involve an educational approach where the veterinarian will discuss the issue with the person in charge and/or send an educational letter. D and E cases are more serious cases that likely require a more rigorous response, and these cases are put together in a case file and referred to MPI Compliance for action.

Case files are focused on the person in charge of the animals. In most cases the person in charge is the person who signed the Animal Status Declaration (ASD). This is usually the animal owner or farm manager. However, some cases will involve the transport company and/or driver who are responsible for the welfare of the animals during the journey, for example back rub in cattle is a specific transport related regulation.

Livestock transport standards

The transport industry has a challenging job to meet the requirements of farmers, agents and processors to transport animals from farm to slaughter and get them there in the same condition as they left the farm. The Transport Code of Welfare (1 October 2018) defines the minimum standards to be met by those transporting livestock whether they are farmers, agents, traders, commercial transport companies or processors. Most livestock animals transported to slaughter are transported by commercial transport operators.

The Code covers the following topics and defines minimum standards under the following headings (i) responsibilities, competency and stockmanship, (ii) equipment (the stock crate, transport vehicle, and loading/ unloading facilities), (iii) journey planning, (iv) preparation and selection of animals for the journey, (iv) loading and unloading, (v) the journey, (vi) special requirements by road, rail, within New Zealand waters, and by air (vii) transport in emergencies, and (viii) emergency humane destruction.

MPIVS veterinarians see animal welfare issues related to all these aspects of the Transport Code, however the majority of animal welfare cases we see relate to the selection and/or preparation of animals for the journey which is predominantly a farmer/owner responsibility. Minimum standard 6 (g) states that “animals must not be transported if they display any injuries, signs of disease, abnormal behaviour or physical abnormalities that could compromise their welfare during the journey, unless a veterinary declaration of fitness for transport has been completed”

When this Code was initially published in 2011, MPIVS worked closely with the NZVA to draft guidelines and procedural documents to support a consistent interpretation of the minimum standard by clinical veterinarians and MPIVS veterinarians presented with 'defective' animals to be accompanied by a veterinary certificate. Those guideline documents are regularly reviewed and were subject to a major update after the publication of the Animal Welfare (Care and Procedures) Regulations 2018. MPIVS regularly publishes articles on matters related to veterinary certification for transport in NZVA and VCNZ publications.

Animal welfare issues related to transport

The more common issues that VS veterinarians are presented with that are linked to transport include:

1. Back rub in adult cattle.
2. Bruising and back rub in young calves.
3. Cull dairy cow recumbency.
4. Heat stress and mortality particularly in sheep.
5. Dehydration
6. Cold stress.
7. Injuries at loading, during the journey, or at unloading.
8. Broken horns or antlers.
9. Horn injuries to pen mates.
10. Rear rub in deer.
11. Mortalities during transport.

MPIVS provides regular reports to the Farm to Processor Animal Welfare Forum (FPAWF) and to the National Animal Welfare Advisory Committee (NAWAC) on trends in our animal welfare case findings. The trend information from our reports has been and continues to be used to identify issues that are a priority for regulation. Our reports also provide data on trends in compliance with standards and regulations.

Livestock crate design and use

While the majority of the welfare issues identified at the end of the journey at ante mortem inspection are related to factors outside the control of the transporter, several of the issues identified above are related directly to livestock crate design and operation.

The stock crates currently used to transport livestock in New Zealand are designed according to the 1993 (NZS 5413) Code of Practice for the Manufacture and Use of Stock Crates on Heavy Vehicles. There have been

changes in a number of areas which mean that this 1993 standard does not reflect current legislation, current livestock and transport industry characteristics, or current animal welfare science and expectations as follows:
- NZS5413 refers to the Animal Protection Act 1960 not the Animal Welfare Act 1999.
- Increased public/consumer perception expectations regarding animal welfare.
- Pressure on the industry to meet other requirements/regulations eg environmental and health and safety.
- Changes to stock crate designs currently evolving.
- NZS5413 is largely an engineering standard and does not incorporate animal welfare in its standards.

With regard to the Transport within New Zealand Code of Welfare, while its review is imminent, it also has not been reviewed for many years. It could also be said this Code does not reflect current livestock and transport industry characteristics, or current animal welfare science and expectations. For example:
- the current Code does not provide standards on transport time or distance hence meat company procurement systems can result in animals being transported very long distances, including across Cook Strait.
- recognising the increasing size and weight of livestock animals with genetic improvement and the impacts on stocking density, and animals being able to stand in a natural posture .
- ventilation appropriate to maintain the body temperature within the normal range for the species.

The standard commercial New Zealand livestock crate is designed to transport all the various species and livestock categories. There are a limited number of transport crates specifically designed for different species and hence in many instances the available space does not accommodate the animal's size and the crate often does not meet minimum standards related to "standing in a natural posture".

Ventilation is also a key requirement of livestock crates to prevent the build-up of noxious gases, and to enable the animals to maintain the body temperature within the normal range for the species. This is a particular concern when the transport crate is stationary. In this situation, given the standard crate relies on passive air movement ie very few crates have active ventilation, and a stationary truck can and does create the conditions for a significant welfare risk.

This becomes a major risk in the warmer months of the year where the ambient temperature, the body heat from the animals, and limited air movement between the animals (think sheep in full wool) combine and can lead to heat stress and death on the truck. This is a particular risk when trucks are moving animals across the Cook Strait. Livestock crates can remain stationary for considerable time waiting to board the ferry. Ventilation on the ferry is dependent on where and how the truck is parked on the ferry. In most instances ferry operators now try to ensure livestock trucks are parked on the outer deck to ensure they are exposed to the sea breeze, but this is not always possible.

There are good examples in other countries of livestock transport crates being designed specifically for the livestock species to be transported. In particular (i) Designs to enable temperature control and air movement to be more effective both when the truck is moving and stationary. (ii) Adjustable side panels on the crate that can be adapted to the ambient temperature and weather, and (iii) Active ventilation systems that can effectively remove heat from the crate even when stationary.

There are also good examples in other countries of the use of standards around the operation of livestock transport vehicles to facilitate good welfare outcomes including (i) licensing of drivers to transport livestock species, (ii) limitations on transport distance and time.

It is timely that the MPI commissioned research report entitled "Livestock Crate Design required to improve animal welfare during transport[1]" was recently published in January 2025.

The Executive Summary from the report makes the following comments:
- although incremental changes to stock crate designs in New Zealand have been implemented over recent years these appear to have been mainly driven by the need to reduce transport costs and comply with regulations (eg effluent management, back rub) and with the aesthetic appearance of the crate also a consideration

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- however there has been little or no scientific evaluation of current crate usage and designs, or recent modifications, and their effect on the crate environment and animal welfare. Furthermore, both government and industry standards are out of step with current science and current crate design and use
- it is unlikely that continuing to invest in small incremental changes, within the limits of the current crate design, will provide significant improvements for animal welfare or driver safety. The 'one size fits all' approach to multi-purpose crate designs in New Zealand fails to meet the varying needs of the different livestock species being transported and meet animal welfare standards
- it is clear there are wider issues associated with the livestock procurement processes and supply chain that pose risks to animal welfare, driver safety and sustainability of the industry that cannot be eliminated through improved crate design alone, therefore this research is only one part of a larger puzzle.
- Findings from this research support the case for reviewing current stock crate guidelines and related industry and government animal welfare standards to reflect current scientific knowledge.

Conclusion

Livestock transport plays a critical role in the success of our livestock industries and our pastoral farming economy. It needs to be an efficient, cost effective, and profitable industry that maintains its fleet to a high standard and continues to meet the increasing animal welfare expectations of domestic and international markets.

The design and operation of the national livestock transport fleet has not changed substantially for many years although there have been some incremental improvements by some operators. There is a need for crate design and operational standards to be updated to reflect local and international expectations.

The recent release of the Livestock Crate Design report will hopefully provide some impetus for the industry stakeholders and government to work together to improve the welfare outcomes for all livestock transported across New Zealand.