

A snapshot of New Zealand farmers' awareness of, and self-reported compliance with, animal welfare requirements

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Abstract

A 2012 telephone survey of 1565 farmers from across pastoral, pig and poultry livestock sectors aimed to benchmark farmer awareness of and self-reported compliance with the Animal Welfare Act 1999 and codes of welfare, and to explore the factors that drive or hinder that compliance. Eighty-two percent of respondents assessed their knowledge of statutory animal-welfare requirements as above average or excellent. However, of the five physical, health and behavioural needs of animals on which the legislation is based, only proper and sufficient food and water and adequate shelter were identified by more than half of respondents (77% and 54%, respectively). Once informed of the needs, 63% considered it not difficult to provide for all five. The majority of respondents reported levels of compliance with statutory animal-welfare requirements above 85% and knew of relevant examples of minimum standards from a code of welfare. The main barriers to providing for the needs of animals were identified as seasonal weather conditions [pastoral enterprises] and lack of money or resources [within the pork and poultry sectors]. In conclusion, while identification of statutory animal-welfare requirements was not high, farmers do understand the concepts that underpin the legislation.

Keywords: farmers; animal-welfare legislation; compliance

Introduction

In 2013, New Zealand's Ministry for Primary Industries (MPI) released an animal-welfare strategy (Anon 2013) that, in recognising that animals are sentient, placed an emphasis firstly on ensuring that their needs are met, and secondly on maintaining New Zealand's reputation as a responsible agricultural producer with high animal-welfare standards.

New Zealand's animal-welfare system rates highly on the world stage. A recent index (World Animal Protection, 2014) ranking 50 countries across the world on their animal-welfare standards placed New Zealand first alongside the United Kingdom, Austria and Switzerland, confirming the quality of the country's Animal Welfare Act 1999 (The Act). The Act imposes a duty of care on those responsible for animals, with the five basic needs to be provided identified as proper and sufficient food and water, adequate shelter, opportunity to display normal patterns of behaviour, physical handling in a manner which minimises the likelihood of unreasonable or unnecessary pain or distress, and protection from, and rapid diagnosis of, any significant injury or disease. Codes of welfare set minimum standards and recommended best practice for individual species and/or practices. The Act is enforced by MPI and Society for the Prevention of Cruelty to Animals (SPCA) animal-welfare inspectors.

However, in order to meet what have been shown to be increasing societal expectations about the way we treat animals (Loveridge 2011; 2013), there is a need not only to have good legislation in place but also to be able to demonstrate compliance with its requirements. Although some private quality assurance (QA) and supplier approval programmes do include welfare standards, under the current government system inspection activity is based on

responding to complaints, with an unverified expectation that "the vast majority of farms will be maintaining adequate animal welfare standards" (Anon 2010). Assisting animal owners and/or people in charge of animals to comply with animal welfare legislation is a focus of the *Safeguarding our Animals, Safeguarding our Reputation* programme (Anon 2010), developed by MPI in collaboration with farming industries.

While researchers have surveyed farmer attitudes to animal welfare both in New Zealand (Matthews et al 1994; Ministry of Agriculture & Forestry & UMR Research 2008) and overseas (Bock et al 2007; Austin et al 2005; Dockes and Kling-Eveillard 2006), there is a paucity of recent literature on farmer knowledge of animal-welfare legislation. Such knowledge, however, is necessary in order to target the right audiences, assure or improve practices, understand the barriers to compliance and measure improvements, as required under the Animal Welfare Strategy (Anon 2013).

This survey was developed to assess farmer awareness of, and self-reported compliance with, the Act and relevant codes of welfare, and to aid understanding of the key factors that drive or constrain compliance within the different farming sectors in New Zealand.

Methods

Beef, dairy, deer, pig, poultry and sheep farmers from throughout New Zealand were selected from Agribase (Anon 1993), a New Zealand database that holds information on all types of rural farm properties. Stratified disproportionate random sampling was used to ensure that the sample size for each sector reflected that sector's size on a national basis. Commercial farms were targeted so, for the beef, dairy, deer and sheep sectors, only those farms of more than 35 hectares in size were included.

Respondents were interviewed by telephone between 16 April and 4 May 2012 and were told that the survey was being carried out for MPI and that they would not be personally identified. Questions were designed to determine respondents' knowledge of animal-welfare statutory requirements, including the needs of animals on which the Act is based, and the difficulties in providing for those needs, the level of compliance with and the challenges and importance of complying with statutory requirements, whether staff were provided with training on their animal-welfare responsibilities, and knowledge of an example of a code of welfare standard, specific to the species of animal they farmed.

Answers were coded by interviewers, with a sliding scale of 1 to 5 used to record the self-reported knowledge of animal-welfare statutory requirements, where 1 was poor and 5 was excellent, and self-reported importance of complying with statutory animal-welfare requirements, where 1 was not important and 5 was extremely important. The question on self-reported level of compliance with statutory animal-welfare requirements asked for a percentage.

Statistical analysis

Cross-tabulation analyses were used to investigate correlations between membership of quality assurance schemes and, firstly, self-reported knowledge of animal-welfare statutory requirements and, secondly, self-assessed compliance with such requirements.

Results

Responses were obtained from 1,565 (391 beef, 379 dairy, 300 deer, 40 pig, 100 poultry and 355 sheep) farmers of 4,744 individuals contacted; an overall response rate of 33%. The margin of error at the 95% confidence level was identified as 2.4%. Responses to specific questions are given in Table 1.

Awareness of animal-welfare legislation

Eighty percent of respondents assessed their knowledge of statutory animal-welfare requirements as excellent (36%) or above average (44%).

Knowledge of the five physical, health and behavioural needs of animals upon which the Act is based was varied. Unprompted, 77% of respondents recalled "proper and

sufficient food and water", 54% "adequate shelter", 35% "protection from, and rapid diagnosis of, any significant injury or disease", 27% "appropriate physical handling which minimises the likelihood of unreasonable or unnecessary pain or distress" and 14% "the opportunity to display normal patterns of behaviour". A proportion, 23%, of respondents refused or were not able to answer (29% beef, 26% dairy, 20% deer, 10% pig, 8% poultry and 17% sheep respondents).

When prompted by a list of the needs, 63% of farmers considered that it was not difficult to meet any of them. The remainder considered protection from injury or disease (13%), adequate shelter (9%), handling which minimises pain and distress (7%), proper and sufficient food (3%) and opportunity to display normal patterns of behaviour (3%) the most difficult to achieve (2% did not know).

The level of self-reported compliance with statutory animal-welfare requirements was high, with 59% reporting compliance of more than 91%, and only 3% reporting it at less than 75%. Ninety-seven percent regarded compliance with the legislation as very important.

While 59% of respondents belonged to a QA or supplier approval programme, no correlation was found between such membership and self-reported knowledge of animal-welfare statutory requirements or self-assessed compliance with such requirements.

Only 585 provided a response when asked to 'identify the biggest challenge they faced in complying with statutory animal-welfare requirements', and some gave more than one answer resulting in 617 responses. Seasonal weather conditions were identified most often (23% of total responses) particularly for sheep (40%), dairy (29%) and beef (22%) farmers.

Other challenges to compliance included lack of money or resources (12%), which was identified most often by pig (63%) and poultry (28%) farmers. Health, injury and disease were also identified as major challenges in 12% of the responses.

Sector results - Beef

Eighty-one percent of beef farmers regarded compliance with statutory animal-welfare requirements as extremely important. Seventy-five percent noted that none of the five welfare needs were deemed too difficult

Table 1 Percentage of respondents (total and by sector) answering "yes" to questions relating to on-farm animal-welfare practice.

	Total	Beef	Dairy	Deer	Pigs	Poultry	Sheep
"Do you have a copy of the code of welfare or other printed documents outlining the legal animal-welfare requirements for your industry?"	60	32	60	76	83	93	66
"Is your farm a member of any quality assurance or supplier approval programme?"	59	22	72	58	78	77	70
"Do you employ staff or family members who are involved with farmed livestock?"	56	36	80	49	75	70	53
"Have staff or family members been provided with training on their animal-welfare responsibilities?"	87	81	84	92	100	100	85

to achieve. From the remaining 25%, protection from injury and disease was mentioned as the most difficult requirement to achieve (by 41% of the remainder; 10% of the total), followed by provision of adequate shelter (32%; 8% of the total).

Eighty-two percent of beef farmers correctly identified nine months as the maximum age that cattle can be dehorned without pain relief. Of the remainder, 13.5% answered incorrectly, while the rest used pain relief, did not dehorn or didn't know.

Sector results - Dairy

Eighty-four percent of dairy farmers regarded compliance with statutory animal-welfare requirements as extremely important; and 58% found the five welfare needs easy to achieve. Of the remaining 42% of dairy farmers in the survey, the needs identified most often as the most difficult to achieve were provision of adequate shelter (by 44% of the remainder; 18% of the total), followed by protection from injury and disease (36%; 15% of the total).

Nearly all dairy farmers (96%) correctly identified nine months as the maximum age that cattle can be dehorned without pain relief.

Sector results - Deer

Eighty-eight percent of deer farmers regarded compliance with statutory animal-welfare requirements as extremely important. Fifty-six percent noted that none of the five welfare needs were too difficult to achieve. Of the remaining 44% of responses the needs recorded most often as the most difficult to achieve were handling which minimises pain and distress (by 48% of the remainder; 21% of the total), followed by protection from injury and disease (28%; 12% of the total).

Ninety-nine percent of deer farmers said the person who develvetted their deer had been approved to carry out that procedure, as is required by legislation.

Sector results - Pigs

Most pig farmers regarded compliance with statutory animal-welfare requirements as extremely important (90%) and found it easy to achieve the five welfare needs (54%). Amongst the remaining 46% of responders, the needs mentioned most often as the most difficult to achieve were protection from injury and disease (by 53% of the remainder; 24% of the total), followed by opportunity to display normal patterns of behaviour (37%; 17% of the total).

Seventy-three percent of pig farmers did not use sow gestation stalls on their farm.

Sector results - Poultry

Ninety-three of poultry farmers regarded compliance with statutory animal-welfare requirements as extremely important and 65% noted that none of the five welfare needs were too difficult to achieve. Of the remaining 35% the needs mentioned most often as the most difficult to achieve were protection from injury and disease (by 47% of the remainder; 16% of the total), followed by opportunity to display normal patterns of behaviour (31%; 11% of the total).

Of the respondents farming layer hens, 68% were using a free-range system. All 13 of those using cage systems gave correct answers to a question on the minimum space allowances for birds in cages. Four respondents farming meat chickens were either using a free-range system, or only raising young chickens. Of the remainder, 79% answered correctly when asked the maximum allowable live weight per square metre. The remaining 21% did not know.

Sector results - Sheep

Seventy-five percent of sheep farmers regarded compliance with statutory animal-welfare requirements as extremely important. Sixty-three percent noted that none of the five welfare needs were too difficult to achieve. Excluding that 63%, the needs mentioned most often as the most difficult to achieve were protection from injury and disease (by 39% of the remainder; 14% of the total), followed by provision of adequate shelter (28%; 10% of the total).

Most sheep farmers (85%) correctly identified six months as the maximum age that lambs can be castrated without pain relief, with a further 12% either always using pain relief or not carrying out this procedure.

Discussion

While respondents in this study viewed themselves as knowledgeable and compliant with animal-welfare legislation, their perception of their knowledge of statutory animal-welfare requirements appeared to be undermined somewhat by a relatively low recall of the five basic needs of animals on which the legislation is based. Only two of the five - those relating to provision of adequate nutrition and shelter - were identified by more than half of respondents. Protection from injury or disease, appropriate physical handling and opportunity to display normal patterns of behaviour were less commonly mentioned, which could indicate that if there were challenges to these aspects of welfare, they might not be as readily identified by farmers as a problem, compared with those that relate to food, water and shelter. However, once the needs had been identified to respondents, the majority assessed them as easy to provide for. This indicates perhaps that they see animal welfare in terms of good husbandry and farming practice rather than in legislative terms.

However, if knowledge of the basic needs is to be used as a benchmark, farmers need to have ready access to the information to ensure they fully understand and comply with those requirements. It is perhaps pertinent, then, that the needs as defined in section four of the Act are not given prominence within the codes of welfare. Of the codes relevant to this paper, the needs are to be found within sections pertaining to legislative requirements. Only in the oldest - the deer code - are these within the body of the code. In the others, they are relegated to appendices. The exception is the newest code - for dairy cattle - in which the needs are not listed at all. There would seem to be a place for a more prominent emphasis on these legislative requirements within the body of the codes. In addition, in

providing animal-welfare training for employees, access to a copy of the relevant code(s) would seem important.

Some differences were noted amongst the industry sectors in terms of availability of codes or other printed documents providing information on animal welfare. Code ownership was relatively high amongst respondents from the pig, poultry and deer sectors.

Respondents were knowledgeable of standards relevant to their business, although there were some notable differences amongst the farming sectors. Understanding of the legislation was self-assessed highest in the pig, poultry and deer industries, and, while these three sectors also had higher rates of code ownership than the sheep, beef and dairy industries, a number of other factors may have contributed to these differences. Firstly, both the pig and poultry industries forewarned their members that this survey was to be carried out. Also, the codes of both these industries had undergone review within the last few years, with the pig code released in 2010, and the meat chicken and layer hen codes in 2012. Both within the code process and in general, these sectors have been under intense public and media scrutiny due to their intensive nature. Their industry bodies have responded with a greater degree of oversight and engagement on matters relating to animal welfare than in the more extensive farming sectors. The deer industry, in particular those who farm stags for velvet antler harvesting, have also been closely monitored through the collaborative project between the National Velvet Standards Body (NVSBS) and the MPI over the last six years, and the NVSBS and Deer Industry New Zealand have made great efforts to encourage and ensure compliance. These smaller sectors together make up only eight percent of the farm population, which should, in theory at least, make communication easier.

Particular animal-welfare challenges also varied by sector. Deer farmers' concerns about stock handling perhaps reflected the relatively recent domestication of the species. Concerns about animal behavioural issues as well as about preventing disease and injury reflected the more intensive nature of the pig and poultry industries, while provision of shelter was clearly more of an issue in extensive systems. Financial pressures were also cited as reasons for failure to comply with animal-welfare legislation.

The majority of respondents belonged to one or more QA programmes, but there was no significant difference between the patterns of responses of farms that belonged to QA programmes compared with those that did not. While assessment of the animal-welfare components of QA programmes was not included as part of this project, this would appear to be an area worthy of further investigation. Kilbride et al (2012) found farmers belonging to assurance or organic-certification schemes had an increased level of compliance with welfare legislation. However, the United Kingdom's Farm Animal Welfare Committee concluded its review of farm assurance schemes (Farm Animal Welfare Committee 2013) with the following statement: "We are concerned that without a combination of regulatory, market

and public forces there will be a loss of focus on animal welfare and the situation will remain confused for the consumer; over-inspected for the producer; and of marginal commercial advantage for the retailer. Worst of all, we would be less able to aspire to, let alone achieve, a good life for all farm animals". This review also reported that the State Veterinary Service (SVS) data in 2005 showed that assured farms had a significant positive effect on welfare, but not universally higher than non-assured, and that, while subsequent research showed that membership of an assurance scheme did equate with better results at Animal Health Veterinary Laboratory Agency farm animal-welfare inspections, this work did not demonstrate a causal link. It is difficult to draw any real conclusion about the situation in New Zealand without an analysis of animal-welfare components of QA and supplier approval programmes.

Selection bias is a possible factor to consider with the methodology used for this research as the respondents were essentially self-selected. This bias was mitigated as much as possible by the design of the interview questionnaire in order to avert undue refusals by respondents in relation to predetermined views on the subject matter or objectives. The majority of the refusals therefore were most likely to have been due to respondents being 'too busy', although the response rate of 33% compares favourably with an earlier New Zealand survey on public attitudes to the use of animals in research, testing and teaching (Williams et al 2007). This earlier survey, again by telephone and carried out by an independent research company, had a response rate of 29%; said by the company to be typical of such surveys.

In conclusion, this survey indicates that while responding farmers may not be familiar with the letter or language of the law in terms of animal-welfare legislation, they do have a good understanding of the concepts of good animal husbandry that underpin the legislation. An analysis of animal-welfare components within New Zealand QA programmes might suggest an alternative approach to measuring compliance with the legislation.

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