

Welfare Pulse

Animal welfare in New Zealand and around the world

OCTOBER 2018

ISSUE 26

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The human-animal interaction – an uneasy association

Over the two million years since Homo sapiens evolved, we have coexisted with animals on a variety of levels and from a wide divergence of perspectives. We care for animals, but we also kill and eat them; we love them, yet we use them in research or testing – we know that they are like us, but we rationalise using them because they are unlike us.

Historically, humans assumed a divine dominion over animals. In the 17th century, Descartes' Cartesian view declared that animals were simply biological automatons – because without language or reason, they are incapable of feeling pain or pleasure. Mills' 19th century utilitarian view encouraged animal welfare by asserting that every individual affected by an action counts equally with every other individual. By the 20th century, Singer's vegetarian view gave animals rights; when we kill them to eat, the benefits to humans do not outweigh the harm to the animal. More recently, changes to New Zealand's Animal Welfare Act acknowledged in legislation what has long been recognised; animals can have positive, as well as negative, experiences.

The earliest human/animal interactions were simple; eat or be eaten. If the human was faster or more powerful than the animal, the animal was a potential food source, but if it was the animal that was faster or more powerful... The larger the animal, the more humans could be fed from a single "kill"; increasing the return for effort put in to the hunt. The corollary was a greater potential for waste if the human group was too small to consume the meat before it spoiled. Both gathering and consuming the food animal became a communal activity. The larger the animal the greater the danger



if it was put in a position of needing to defend itself. So, the driver of ancient human/animal interactions, from either side, was survival within a relationship based on instinct. Primitive hunter-gatherers may have moderated that by also demonstrating a spiritual respect towards the animals.

Slowly, the balance of the relationship changed. Humans moved closer to the top of the food chain by developing tools and/or weapons that allowed them to immobilise or kill large animals without having to get so close as to place themselves in danger. The progression and use of projectile weapons also allowed humans to target smaller animals that would otherwise have escaped using speed. The basis of the relationship was subtly changed by the human ability to make purpose-specific tools.

With progress, humans recognised that some animals produced a single (e.g. meat) or continuing (e.g. milk, cheese, eggs) food

continued...





Photo: G Shackell

source that could also be processed and stored. Other animals produced fibre, which could be cyclically harvested and turned into clothing. Some animals were strong enough to pull implements that could cultivate land, allowing large areas of crops to be planted then harvested and stored. There was also a bonus; generally, none of these animals presented any immediate danger to the humans. While

some could be dangerous if sufficiently provoked, that was avoidable. The relationship had become more contractual – if humans made certain that the animals were fed and cared for, the animals supplied food, clothing and/or work in return. If the animals tended to wander, they were retained by corrals or fences, which at the same time as offering them protection from predators also concentrated them as sources of prey. Some animals, that were not a potential source of food for humans, were kept simply for the pleasure they could provide, either as companions or as a source of entertainment. Domestication changed the human/animal interaction again; the relationship had moved towards co-dependence.

Then the relationship began to devolve. Some humans gradually began going out to making a living by providing goods and services for others, rather than living in a subsistence lifestyle. As a result, they became time-short and reliance on a few to

produce the bulk of the food required by the many developed. But that carried with it a corollary. By reserving the right to go out and earn a living, “someone else” would have to do all the work necessary to provide animal-derived commodities. We, as humans, delegated a small number of people to make their living by taking over something that allows us to make ours. The implication is that the people who take over that role must be allowed to do it profitably – after all, they are now making a living by allowing others time to make theirs. This has a down side when it comes to commodities derived from animals. Profitability translates to cost efficiency; which means that the people entrusted to manage the animals (and supply food) for us may do things in a way that impinges on our ‘vision’ of how an animal should be allowed to live a “good life” and have a “good” death.

Understanding of how we interact with animals continues to evolve and challenge societal views. Increasingly, non-animal food alternatives are being developed and offered. Paradoxically, there are now “vegetarian” options that are labelled as bacon, chicken and hamburger and, no doubt the list of alternatives will continue to grow. Some uses of animals that have long been viewed as entertaining, such as rodeos and racing, are increasingly coming under scrutiny. Farming methods such as battery cages and farrowing crates are becoming increasingly unacceptable. An explosion of social media postings shows “companion” animals in situations which some find amusing, but which others may view as undignified or degrading. Is it really in a cat’s best interest to scare it with a cucumber simply so that people can have a laugh?

Laws and regulations are in place to protect animals and for the most part they work. However, occasionally individual humans may, for a wide variety of reasons, act in ways that are an affront to the sensibilities of others in society and/or animals.

The challenge is not to interpret isolated incidents as universal behaviours.

Realistically, humans will carry on using animals for food, companionship and entertainment. Each of those uses will have proponents and opponents, but ultimately humans will continue to benefit from animal compromises. As members of society, we will continue to be challenged, we will continue to debate, we will continue to disagree – and our views will change.

As we continue to examine and critique our beliefs, our prejudices and our relationship with animals, the welfare of those animals should unquestionably remain the priority.

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New animal welfare regulations

New regulations to strengthen our animal welfare system came into effect on 1 October 2018.

Ministry for Primary Industries Director for Animal Health and Welfare, Dr Chris Rodwell, says the 45 new regulations cover a range of species and activities from stock transport and farm husbandry procedures to companion and working animals like dogs and horses.

“We want to encourage people, who are responsible for any type of animal, to check they are up to date in how they are looking after them,” says Dr Rodwell.

“Our team has been working with industry and sector groups to raise awareness of the regulations and ensure people understand and can meet their responsibilities.

Most New Zealanders already care for their animals well, so if you’re already doing the right thing, you won’t see a lot of change.

The majority of the regulations reflect existing standards, but there are a few that do set new rules and requirements, such as prohibiting the tail docking of cows and dogs.

Even if you already think you are doing the right thing, it’s best to check and make sure you are.”

One of the main changes is that the new regulations will make it easier for MPI and the SPCA to take action against animal mistreatment.

“These regulations will allow us to better respond to lower levels of offending, and target specific behaviours that need to change, for example, if people allow their animal’s horns to become ingrown, they can be fined \$500. We will continue to prosecute the worst offenders under the Animal Welfare Act”.

In developing the regulations, current science, good practice, and the views of submitters were taken into consideration. For more information on the regulations, and to check if you’re doing it right, head to:

www.mpi.govt.nz/animalregs

Codes of Welfare Survey

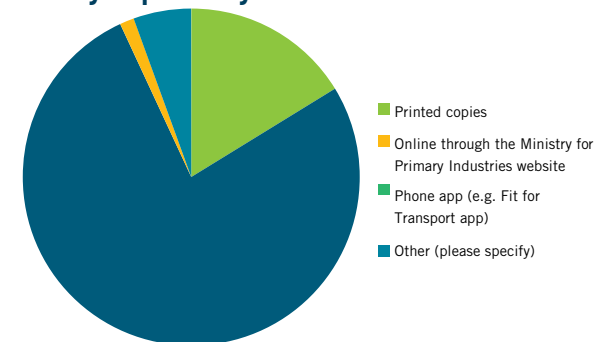
In August 2017, the National Animal Welfare Advisory Committee (NAWAC) shared a survey with animal owners about the structure and function of the codes of welfare. NAWAC sought feedback to understand how people use codes of welfare, how they access codes, how they communicate information about codes of welfare to their own stakeholders, and how codes of welfare can be improved. This was prompted by the introduction of directly enforceable animal welfare regulations and the need to understand how this may change the function of codes of welfare.

There were two versions of the survey: one shared online via social media, and one for targeted stakeholders that were known to use codes of welfare already. A total of 3,206 people clicked on the general codes of welfare survey online, and 50 groups responded to the targeted survey, which was a fantastic response.

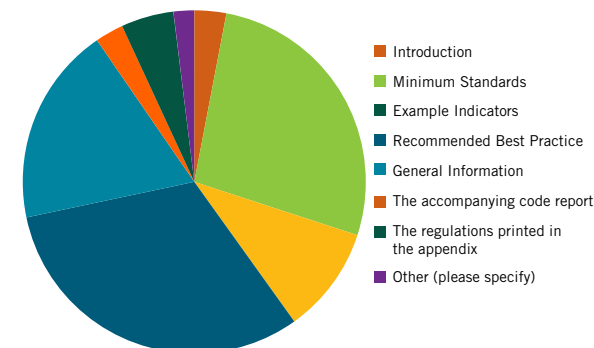
As a result of the survey, NAWAC agreed to several changes in the codes of welfare and in their internal processes, including the following:

- Publish regulations inside codes of welfare. Users value how comprehensive codes of welfare are, and that all of their obligations can be found in one place.
- Promote recommended best practice. Recommended best practice was found to be the most useful section for the public.
- Include a link to the code report inside the codes. Users may find it useful to know that the code reports are available and that they explain the reasons for the standards.

How do you primarily access codes of welfare?



Which parts of the codes of welfare do you find most useful? Please choose up to 4 options



- Increase access to the information in codes of welfare. Access to and awareness of animal welfare standards was commonly reported as a problem. Most people read codes because it’s a requirement for their jobs. For others, NAWAC should partner with groups to promote animal welfare information – if people are not reading the full codes, this may be acceptable as long as they

are still getting the correct information in another way (e.g. through their veterinarian, via a phone app, or from a pamphlet made by an industry group).

- Review codes based on welfare risks, not deadlines. On average, respondents thought that codes should be reviewed every 6 years, but many favoured a risk-based approach instead, because it depends so much on the specific issues involved. NAWAC agreed to review standards based on risks raised in their **prioritisation framework**, and meanwhile the secretariat will be tasked with routinely reviewing minimum standards based on good practice, scientific knowledge and available technology to feed into this process.

NAWAC thanks everyone who took the time to answer the survey, as it provided valuable data to help them understand how codes of welfare and regulations will work together in the future.

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NAEAC AEC Service Award

Former NAEAC member and Deputy Chair, Dave Morgan, was awarded a NAEAC Animal Ethics Committee Service Award by current Chair, Grant Shackell, at a function for Christchurch Animal Ethics Committees in May. The following is the citation from the members of the Landcare Research AEC, who nominated Dave for this award:

Dave Morgan has served on the animal ethics committee (AEC) of Landcare Research and its forerunner organisations for 30 years since the committee was formed in 1988. The predominant nature of the research work that this committee considers is in the area of wildlife conservation and vertebrate pest management.

Dave was responsible for developing and implementing a comprehensive Code of Ethical Conduct to enable researchers to operate in compliance with animal welfare legislation. Five-yearly independent statutory reviews have shown that Landcare Research and its AEC have consistently met the legal requirements in an exemplary manner. The research is often controversial, involving the use of traps and poisons in many cases, and has required informed and sensitive chairing of the committee to arrive at consensus decisions and constructive advice to researchers.

Since 2003, Dave has also served as an MPI-accredited reviewer, assessing compliance by animal research organisations with the Animal Welfare Act. His reviews have often been recognised by research organisations as very helpful in enabling improvements to both compliance systems and animal welfare practice.

From 2007-2014, Dave served on the National Animal Ethics Advisory Committee, and was appointed as Deputy Chair during 2010-2014. During this time he developed practical advice for AECs on both monitoring obligations/methods and avoidance of duplication, presented many conference papers on these and other topics, and contributed to recent changes in the legislation that brings the welfare cost of genetically manipulating animals under AEC consideration of the cost:benefit comparisons of proposed research.

Dave's achievements in the animal ethics arena have previously

been recognised through being awarded a Landcare Research *Science Excellence and Service Award* and an ANZCCART *AEC Member Outstanding Service Award*, both in 2009. Dave has also actively pursued his career as a research scientist for 44 years, focused on vertebrate pest

management. He was recognised for providing long-standing research benefits to New Zealand by the awards of both the Shorland Medal (co-winner) in 2013 (awarded by New Zealand Association of Scientists) and the Peter Nelson Award in 2015 (awarded by the New Zealand Biosecurity Institute).

His long term of activity in all four roles (i.e. scientist, AEC Chair, NAEAC member and independent reviewer) has enabled Dave to contribute much to the development of the animal ethics system and its implementation in New Zealand. The committee members therefore consider that Dr Dave Morgan is a worthy nominee for a NAEAC AEC Service Award. We are sure that Dave would be honoured to receive this award as he now approaches deserved retirement.

Dave Morgan was also awarded one of two ANZCCART AEC Member of the Year Awards for New Zealand AEC members at the ANZCCART Conference in Canberra in July. The other was Dr Deborah Samson, New Zealand Veterinary Association nominee on the University of Auckland's AEC.



Dr Dave Morgan (right) receiving his NAEAC AEC Service Award from NAEAC Chair Grant Shackell

Identifying Best Practice Domestic Cat Management in Australia

A report by RSPCA Australia

Cats play a special role in many people's lives but they also pose significant challenges, particularly overpopulation and high euthanasia rates. Despite efforts by welfare/rescue groups and some government agencies, to prevent and manage specific issues, more needs to be done. A new report 'Identifying Best Practice Domestic Cat Management in Australia' released by RSPCA Australia aims to help stakeholders to focus future discussions on initiatives which have been identified to help reduce cat overpopulation as well as other associated issues. The report was a culmination of feedback received on a draft discussion paper from over 1100 people who completed an online survey, 759 email responses and 106 separate submissions as part of a two month public consultation process.

The report comprises 21 key recommendations, several case studies, an assessment of the potential effectiveness of specific strategies and cites over 250 contemporary articles and publications. The five key recommendations identified as having the greatest potential to reduce cat overpopulation are mandatory identification, targeted low-cost desexing, increased adoption, greater access to cat friendly rental accommodation and improving attitudes towards cat ownership.

One consistent thread linking many successful cat management strategies is collaboration between government, welfare/rescue groups, veterinarians and the community. The report recommends this approach is used to support the following activities:

- targeted low-cost desexing programmes including mobile desexing units and promotion of pre-pubertal desexing (PPD);
- promotion of cat containment to safeguard welfare and reduce nuisance;
- support for humane and effective approaches to manage domestic cats.

One of the most important aspects is the acceptance and use of agreed definitions for different cat populations by all stakeholders. Various definitions have been used to categorise cats in different populations, but most share a common basis in that they describe some aspect of a cat's relationship with humans. The lack of universally agreed cat definitions causes confusion and conflict creating inconsistencies in legislation and difficulties in implementing cat management initiatives. Cat management strategies aimed at influencing human behaviour must recognise the ownership status of cats as well as their level of socialisation to, dependence on and relationship with humans. The most important definitional delineation is between feral and domestic cats as this has profound consequences for the treatment and fate of individual cats, especially stray domestic cats who are often labelled "feral". The report recommends specific wording to define the categories of feral cats and domestic cats, with three subcategories of domestic cats being owned, semi-owned and unowned.

As a result of preparing the report, RSPCA Australia is examining ways of increasing pre-pubertal desexing (PPD) by vets and encouraging the uptake of cat containment. A recent survey of veterinarians in the Australian Capital Territory, which has mandatory desexing prior to 3 months of age, found that 35 percent of veterinarians were not aware of this, whilst 90 percent did not recommend it. The RSPCA is currently identifying opportunities to encourage veterinarians to offer PPD.

The report also identified the importance of using social research to evaluate and achieve behaviour change regarding responsible cat ownership. RSPCA Australia is investigating this approach with a new project to evaluate the impact of a cat containment guide on attitudes and behaviour of new RSPCA cat adopters in Queensland.



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Cats in New Zealand

The issues discussed in Australia are not unusual, and the costs and benefits of cats are debated around the world.

See New Zealand's *National Cat Management Strategy Discussion Paper* here: <http://www.nzcac.org.nz/nzcac/nzcac-resources/nzcac-newsletters/7-blog/83-national-cat-management-strategy-discussion-paper>

If the head's dead, is the animal dead?

Comparing national and international standards of signs required to confirm death in calves

The age old question: what is more important, the head or the heart? During culling in response to disease outbreaks, confirmation of death requires quick and accurate recognition of signs of death. But what are these? And can we declare death even with the presence of a heartbeat, limb movements or spasmodic breathing? The following looks to provide guidance on the required signs before declaring death in calves.

Killing animals is never easy, especially killing large numbers of hand-reared calves. As such it is important that it is performed in the quickest, most effective manner that causes minimal pain and distress to animals. Yet a comparison of the current expectations of national and international industry

leaders showed that while there is general alignment of guidance, significant variation exists. This variation is thought to have given rise to variation in expectations of industry professionals.

Interestingly, the absence of a heart beat is required only by New Zealand's code of welfare for dairy cattle, although declaring an animal as dead despite hearing a heartbeat may seem counter intuitive to many! Those signs associated with severing the brain stem reflexes were the most clearly supported in the literature and legislation, shown by near unanimous support for the top three rows in the table. This highlights an issue of scientific objectivity (what the data and science shows) and the projection of subjective empathy to a

situation (how humans feel about it). Today's society is greatly influenced by our moral responsibility to find the right way of doing things. No longer can farmers hide behind the geographic barriers between rural and urban, with urban sprawl, lifestyle blocks and social media exposing farming practices. This is compounded by a greater disconnect between public and farmers due to the decreased exposure of many to rural life. MPI needs to be able to balance objectivity with subjectivity to satisfy the needs of both science and humanity in order to remain world leaders in animal welfare and maintain the social licence for farms to operate.

This review concluded that the process of death is complex and multifaceted. However, the absence of the heartbeat is not considered necessary to declare death in calves. Possible clarification and communication of why certain physical signs are required to be observed may help to align individual viewpoints. This is seen as just one of many topics that may need to be reviewed in order to bring greater alignment between objectivity and subjectivity of "best practice" in the farming of the future.

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Table 1: Collation of the physiological signs required to be observed before death can be declared in a calf

Physiological indicators of death	MPI internal guidelines	The Humane Slaughter Association	Code of welfare for dairy cattle	Independent science advice	American Veterinary Medical Association euthanasia guidelines	OIE Terrestrial Animal Health Code 2017
Dilated pupils with glazed eyes	✓	✓	✓	✓	✓	✓
Lack of corneal reflex	✓	✓	✓	✓	✓	
Lack of righting reflex	✓	✓	✓		✓	✓
Lack of rhythmic breathing	✓	✓	✓	✓		✓
Tongue flaccidity	✓					
Lack of vocalisation	✓			✓		
Lack of muscular tension	✓					
Body becomes tonic (rigid) immediately after being shot						✓
Seizures				✓	✓	
Absence of a heartbeat			✓			

Transporting pigs

That road transport is stressful for animals is well recognised. However, it was thought that transport conditions in New Zealand may differ from overseas countries. Unlike the northern hemisphere, where the majority of transport stress studies have been undertaken, New Zealand has a temperate climate with relatively mild winters and summer temperatures that rarely exceed 35°C. As a result, designs of the crates used to transport livestock in New Zealand differ markedly from those that are common in the northern hemisphere.



A three-year study was undertaken to look at the stress levels in pigs during transport. Pigs were chosen because, unlike other species, they have clear indicators for the early stages of the onset of stress. A camera and temperature/humidity data loggers were mounted in a conventional stockcrate that was used to transport pigs weekly from two South Island farms to an abattoir. During the study loads of cattle and sheep were occasionally monitored. To minimise some of the variables inherent in stock transport, the same two farms were used throughout the study and the same truck, trailer and driver were monitored for the whole of the study.

Whilst rough handling, overcrowding and poor ventilation have all been identified as significant causes of stress to animals during transport, heat stress has been universally recognised as the major concern. To monitor heat stress a mathematical formula has been developed that combines temperature and humidity to produce a temperature/humidity index (THI).

Charts that relate temperature to humidity have been developed that commonly have a THI range of 30 – 100. Whilst different species have subtly different ranges that denote cold or heat stress conditions, pigs, sheep and cattle are reported to share a “comfort zone” with a THI range of between 60 and 70. This study showed that pigs demonstrated the first signs of heat stress when the THI reached 73.

Results showed that the greatest stress periods for all three species was immediately after the animals were loaded onto the vehicle or during mid-journey periods when the vehicle was stationary. As noted in the international literature, it was confirmed that the pens most affected by heat stress are those at the front of the truck’s stockcrate. During the study, it was shown that heat from the truck’s motor contributed to the build-up of heat in the front pens. As a result, a layer of insulation was applied to the external surface of the front wall that reduced the temperature of the pen walls.

Clearly, the psychological stress on the animals, having been moved from an environment to which they had been habituated to a completely strange and confining environment, combined with the handling stresses associated with loading, resulted in a significant stress response. The increasing stress levels during mid-journey stationary periods was associated with the increased ambient temperatures that occurred as the day progressed. However, the mid-journey stress response was also associated with an increase in humidity, suggesting that air flows within the pens were not optimal.

Of particular interest was the finding that the stress levels rapidly declined once the vehicle started moving. Despite summer temperatures often reaching more than 30°C, occasions when stress levels were greater than the “comfort

zone” were less than 2 percent of the total when the vehicle was moving; during stationary periods stress levels greater than a THI of 73 occurred on less than 2 percent of journeys. It was noted that even in mid-winter stress levels during stationary periods occasionally occurred that were greater than the “comfort zone”.

The findings from the study suggest that great care needs to be taken to minimise the stresses associated with the loading of animals onto transport vehicles. The study has now been expanded to look at the impact that a novel fan-delivered ventilation system may have on the environments in the front pens of the truck’s stockcrate.



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This study was undertaken through Lincoln University as part of a PhD thesis

Designing systems that promote natural behaviours

Commercial livestock systems, regardless of the species, are typically geared towards promoting good health and production of the animals. Other factors that might be important to the animals, such as the ability to perform natural behaviours, may not necessarily take precedence. The Animal Welfare Team at AgResearch has been striving to explore shifts in management that can be more focused around animals' natural behaviours. These management shifts are often informed by the animals' preferences and may be quite simple.

A recent example produced by the Animal Welfare Team examined potential alternative ways of offering feed to commercially housed goats and was published in collaboration with the University of British Columbia's Animal Welfare Program (Canada).

Rather than grazing, as we are used to seeing cows and sheep doing, goats are natural browsers. They have been reported to spend anywhere between 20 percent and 90 percent of their feeding time sampling different types of vegetation. Some of this browsing time can be in a bipedal position where goats are perched on their rear legs and browse above their head level. Based on this evidence, the recent study gave goats their daily feed ration at three different heights and let the goats 'vote with their feet'.

What happened was not entirely unsurprising, but was the first study of its kind to suggest that tapping into goats' natural motivation to eat from an elevated position improves feed

intake – and may therefore directly benefit farmers too, since more feed consumed often equals better milk production!

Goats ate more from a feeder that allowed the goats to perch and feed above their head. They also visited this feeder more than when the feed was presented at a height that mimicked a grazing posture. An unexpected finding was that goats competed more to access feed that was presented above their head. Since the feed was identical to that offered in the other feeders, the increased competition is a good indication that the goats were keen to adopt the feeding position promoted by the elevated feeder.

Interestingly, there are already farmers around the world exploring the option of presenting feed in this way. They provide a good example that simple changes to farming systems that promote natural behaviour and better meet the goats' preference are possible. Moreover, on a positive note, some of these changes could improve production – which in turn is a beneficial situation for both the animals and the farmers.

Reference:

Neave et al. 2018. *Feed intake and behavior of dairy goats when offered an elevated feed bunk*. Journal of Dairy Science Vol. 101 No. 4, 2018



A commercial farm where feed is delivered at an elevated height relative to the goats

Photo: Henry & Anja van der Vlies & family



Example of elevated feed bunk utilised on farm (in Ontario, Canada)

Photo: AgResearch Ltd

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Monitoring calf welfare regulations: Report on 2017 Follow-the-Trucks Programme



Background

As part of the Verification Services (VS) follow up to the introduction of new bobby calf regulations in 2017, a programme of following bobby calf collections around the country was initiated. This was not the first time this strategy had been used but previous versions of the programme had been carried out on a more limited scale.

The perceived benefits of the programme were:

- to promote and increase awareness of the requirements around bobby calf transport, in particular in regard to the regulations for bobby calf transport;
- to ensure that transport operators and farm suppliers were meeting these requirements; and, in particular
- to ensure that the requirements for shelter before transport as well as loading ramps at the time of loading were both available and being used.

Regulations

In total, seven regulations relating to the transport of bobby calves were introduced on 1 October 2016, all of which were in force by 1 August 2017. These regulations are now included in the Animal Welfare, (Care and Procedures) Regulations 2018, and are monitored by VS veterinarians at all premises that are processing live bobby calves.

- **Reg. 9** Maximum time calves may be off feed during transport and before slaughter.
- **Reg. 10** Providing for shelter on farm, at saleyards and before and after transport.
- **Reg. 33** Ensuring calves are old enough and fit for transport.
- **Reg. 34** The maximum duration of transport journeys.
- **Reg. 35** Providing suitable loading and unloading facilities for transport.
- **Reg. 36** Providing shelter during transport journeys.
- **Reg. 37** Prohibition of transport of calves across Cook Strait.

In addition, Regulation 8 prohibits the use of blunt force trauma to kill calves. This requirement can also be verified during the programme by questioning calf handlers and observing killed calves during slink collection.

Details

Eight VS veterinarians followed approximately 35 live bobby calf trucks and 3 slink (dead calf) collection trucks. All of these veterinarians were warranted animal welfare officers and all had received training in animal welfare monitoring and investigation prior to participating in the project.

The trucks covered bobby calf runs from Northland to Southland. Of these, nearly half were in Northland, Auckland, Waikato and the Bay of Plenty. Most geographical areas were represented, including the West Coast but there was little

resourcing in the Hawke's Bay and, notably, the Taranaki regions.

In total, approximately 445 farms were visited, and in addition, three bobby calf saleyards were visited to verify transport of calves to and from the sale.

Findings

The anticipated benefits were confirmed, with very high levels of compliance recorded on the properties and sales visited. This was in contrast to feedback immediately prior to the bobby calf season that loading ramps, in particular, were posing difficulties for many farm suppliers. In fact, only two or three cases of non-compliance were recorded, for which compliance notices were issued. Several minor or temporary deficiencies were addressed more informally.

The programme commenced before 1 August 2017, so some farms were visited before all of the regulations came into force. In spite of this, only a small number were not compliant with the regulations and in each case, provisions were in place for the changes as of 1 July.



continued...

Many innovative solutions and designs were observed for providing shelter and loading calves. In some cases, no calves were loaded on days when no shelter was available – calves were only offered for collection on fine mornings on these properties. Advance notification of – and adherence to – truck schedules provided a significant advantage over previous seasons when some calves were put at increased risk because of lack of appropriate shelter.

An unexpected outcome was that the programme was received openly and enthusiastically by almost all of the transport operators contacted. Some operators who were not originally contacted to participate volunteered to do so. Saleyards staff were also very positive and receptive to Ministry for Primary Industries input. In many cases, they would have welcomed a VS presence on every truck on every run and at every sale. This was mainly due to perceived resistance by some farmers towards compliance, but personal experience and positive feedback from other VS participants confirmed that the programme was also widely supported by farmers.

Conclusions and Recommendations

The programme was a proactive approach to verifying compliance with the new requirements in the regulations specified above. In this respect it was a success with a high level of compliance observed in all of the areas visited. While the programme did not cover every dairy farm or region in New Zealand a large number were visited and visits were spaced across the country from Northland to Southland.

It is proposed to repeat the programme in 2018, with a special emphasis on the 2 main regions not covered in 2017. New funding has been allocated for this project and it will have already commenced for the bobby calf season by the time this article goes to print.

Examples of the loading and holding facilities seen are included in the photos.

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Humane pest control and drowning traps do not mix!

New Zealanders are encouraged to use pest control tools in ways that minimise unwanted impacts on animal welfare. In support, the Government funds the development of practical and humane pest control tools, with a view to increasing the use of more humane alternatives over time. New tools are particularly important to help move New Zealand towards becoming predator free by 2050 – a goal intended to bring benefits for conservation, biosecurity, the primary sector and New Zealand communities.

However, new is not always better, or more humane. Recently, rodent traps which rely on the use of a preserving solution (such as EkoFix solution used in the Ekomille trap system) may have been offered for sale within New Zealand. These traps cannot be used in New Zealand, as the solution is currently not registered as a Vertebrate Toxic Agent (VTA) as required under the Agricultural Compounds and Veterinary Medicines (ACVM) Act. More information can be found here: <https://www.mpi.govt.nz/processing/agricultural-compounds-and-vet-medicines/vertebrate-toxic-agents/>

Importantly, the traps must not be used with water only, as drowning is considered a prosecutable offence under the Animal Welfare Act 1999. Where the traps are used dry, they are a live-capture trap and require daily inspection as required under the legislation. From October 2018 you can be fined \$300 for failure to inspect live-capture traps.

See <https://www.mpi.govt.nz/protection-and-response/animal-welfare/traps-and-devices/>

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Calves under the South American Sun

There is nothing like hopping off a long-haul flight and heading straight to a farm to make you feel at home. I had been invited to Argentina and Uruguay to talk to farmers about the calf-rearing systems that we use in New Zealand, and to see how their calf-rearing systems operated. The first farm could have been in New Zealand. Groups of crossbred calves greeted me from an open sided shelter. The calves were kept inside for the first few weeks and then transitioned outdoors. It was almost dark by the time we left the farm, leaving me to wonder what the countryside we passed through would look like. In true South American style dinner was late; would I ever see my bed?

We drove through vast expanses of flat land with azure skies. Fields of soy, sorghum and maize for miles, broken up by eucalyptus trees, reminding me very much of Australia. The maize was around fence height, miniature in comparison to the fields I had left behind. It was dry, abnormally so for the time of the year, and the crops were suffering as a result.

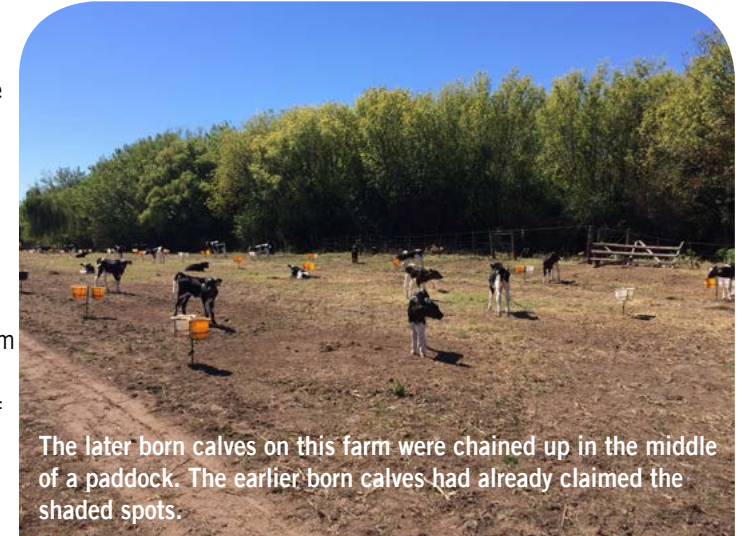
Calving occurs for much of the year on most farms, normally starting in February/March with a surge of calves arriving, and running through until November. Calf-rearing is therefore nearly a year-round activity too. North American influences are obvious on many farms, with large Holstein type cows and individual calf-rearing systems. Calves on chains, like dogs, with their own milk and feed buckets were an unfamiliar sight for this Kiwi. Disease control was cited as a reason for keeping the calves separate. However, the milk delivery systems involved walking from calf to calf, which provided the opportunity for disease to spread via a human vector. On some farms the calves did have access to some degree of shade and shelter, but on others they were simply chained in the middle of paddocks. Calf-rearing facilities are not always a priority in New Zealand, and it appeared the same was true here.

The level of record keeping in relation to calf mortality was impressive. Many farms acknowledged they needed to improve their calf survival – and had good records to show their level of mortality.

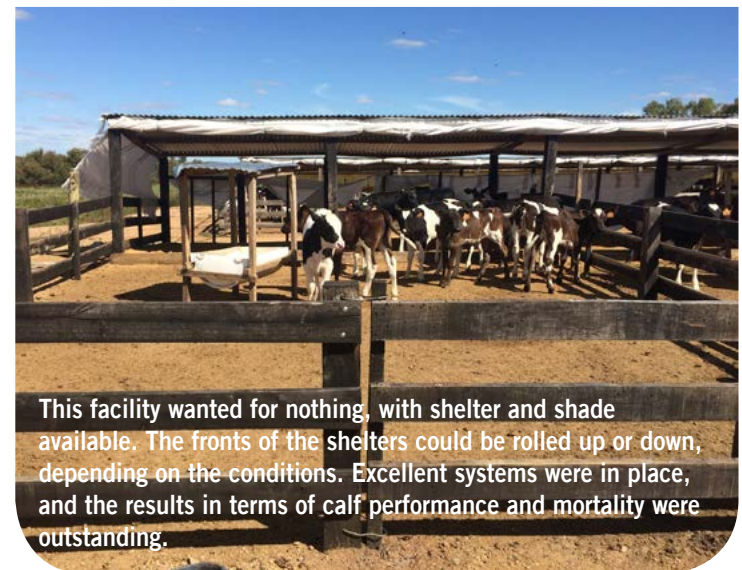
Most Kiwi farmers would try to rear around 100 heifers for a 400 cow herd. Many farms I visited were trying to rear every single heifer calf (and often the male calves too) with a desire to grow cow numbers. However, high levels of calf mortality, combined with poor reproduction and cow survival, meant many farmers were not managing to grow their herds at all. Rearing almost every calf puts a strain on the facilities – and people. There is also a significant milk cost of rearing every calf, particularly if they don't survive to enter the herd. The milk volumes being fed on some farms were very low. One farm was only feeding 1L in the morning and 1L in the night for the first week, certainly sub-maintenance feeding levels. Staff payment structures probably contribute to low milk feeding levels, with some staff receiving a share of the milk cheque, which actively incentivises poor calf rearing.

My trip ended on a high note, with a visit to a calf-rearing facility in Uruguay. The facilities were not lavish but had been carefully planned, and outstanding results were being achieved.

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The later born calves on this farm were chained up in the middle of a paddock. The earlier born calves had already claimed the shaded spots.



This facility wanted for nothing, with shelter and shade available. The fronts of the shelters could be rolled up or down, depending on the conditions. Excellent systems were in place, and the results in terms of calf performance and mortality were outstanding.

Animal Welfare Workshop at Wellington Zoo

On 26 and 27 May 2018 Wellington Zoo hosted an Animal Welfare Workshop, as part of the regional Zoo and Aquarium Association Conference.

The workshop had over 70 participants from countries around the world, including New Zealand, USA, Singapore, Australia, United Kingdom, New Caledonia and the Netherlands to name a few.

The presentations covered a wide variety of subjects including global animal welfare perspectives, animal welfare law and regulation, animal welfare in zoos and aquariums, Zoo and Aquarium Association animal welfare accreditation, community engagement with animal welfare in zoos and aquariums, veterinary science, habitat design, and future directions.

Some of the many highlights of the workshop included the following.

Sabrina Brando, World Association of Zoos and Aquariums presented on “Animal welfare on a global scale in progressive zoos and aquariums” which included some thought provoking topics covering a variety of things including future research opportunities, partnerships for animal welfare and considering what happens for the animals in our care after we all go home for the night.

Dr Sally Sherwen, Zoos Victoria, and Dr Bridget Brox, Wellington Zoo, presented on “Animal welfare and ethics strategies for zoos”. This session made us think about the future and how that is affected by what we do now. The research on the impact of visitors on zoo animals in traditional habitats and also within animal encounters was discussed and specific studies were showcased.

Daniel Warsaw MBA, Wellington Zoo, gave a presentation on “Influence of animal welfare accreditation programmes on zoo visitor perceptions of the welfare of zoo animals”. One of the most interesting things from this presentation was that visitors had more confidence in the welfare outcome for an animal in a

welfare accredited zoo than in a non-accredited zoo, even when the behaviours demonstrated by the animal were identical.

Samantha Chiew, PhD student Melbourne University, presented on “Zoo visitor-animal interactions: effects on both the animal in display enclosures and visitors”. Samantha covered research that she has undertaken at a number of Australasian zoos on the effect of visitors on little blue or fairy penguins. This research is showing the effect of habitat design, and individual animals, as well as the visitors on the impact of the visitors on the animals. The three zoos where the research has been undertaken all have very differently designed habitats, different numbers of penguins, and in the case of Wellington Zoo the latest research is showing that New Zealand little blue penguins are in fact a different species to the Australian ones. This is demonstrating that even if one outcome is found at one zoo the research needs to be repeated across other zoos to be able to take into account those differences.

Dr Jim Webster, AgResearch, gave an interesting presentation on “Habitat design - environments for animals”. Jim’s insightful presentation talked about what zoos can and have learnt from agriculture, whilst also covering what agriculture can learn from zoos. One of the examples Jim gave was how traditionally goats are cared for in a similar manner to cattle, but when you look at their natural behavior and wild habitats they are very different.

Dr Ngaio Beausoleil, Animal Welfare and Bioethics Centre, Massey University talked about “Beyond the obvious: How can we better see the welfare impacts that might be there?” and covered a number of topics, but one of the messages was to avoid generic terms but rather to name the behaviour.

Presenters from ZAA, MPI, NAWAC, universities, SPCA and NZVA and other animal welfare specialists all added a diverse view of the latest thinking in animal welfare. Zoos and aquariums delegates who attended learnt much from this range

of thought leaders in the animal welfare science area.

Wellington Zoo was very grateful for the time the presenters gave to be at the workshop and we hope to host similar workshops in the future.



Workshop participants, Wellington Zoo

Photo: Karen Fifield

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Zoo and Aquarium Association Australasia Animal Welfare Accreditation

The Zoo and Aquarium Association Australasia (ZAA) has an accreditation programme that is a requirement for all members. The initial ZAA member accreditation programme looked at all of the functions of a zoo. This included duplication of government regulation and other forms of accreditation.

ACCREDITATION ROUND 2 2015 - 2017



In 2014 a new accreditation program (AR2) was released, replacing the old programme. The new programme focussed solely on animal welfare. During the first round of welfare accreditation, between 2014 and 2016, ZAA members were required to demonstrate that they understood the five domains model for animal welfare and how this model applied to the animals in their care. ZAA animal welfare accreditation is a unique programme launched by the Zoo and Aquarium Association to promote positive animal welfare states in the animals cared for by its more than 90 members across Australasia.

All ZAA members are required to undertake welfare accreditation every three years. During each subsequent round additional requirements, such as safety, can be included as

part of the accreditation process. Because the programme is tailored for use in zoos and aquariums, it enables ZAA to better understand how positive animal welfare is supported in all member organisations.

The ZAA accreditation programme identifies the condition of an animal by utilising the five domains model. Importantly, the assessment considers the needs of the various species, but also relies on an assessment by an experienced carer that understands the dynamics and needs of individual animals.

The promotion of positive animal welfare states as assessed in the accreditation programme complements, but does not duplicate, the members' requirement to also comply with minimum regulatory standards as set out by state or national governments. In doing so, it provides added assurance to regulating authorities, zoo visitors and the wider community of the holistic approach to animal care that goes beyond just meeting minimum legal requirements.

The accreditation programme also provides a framework for non-government organisations (NGOs), governments within Australia and New Zealand and, increasingly, overseas zoo and aquarium associations to understand how positive animal welfare may be promoted in zoos and aquariums.

Based on scientifically-validated research, the five domains model recognises that animals experience both negative and positive feelings and sensations, and that these are generated by the conditions in which they live. For example, an animal impacted by restrictive conditions (insufficient food, close confinement or social isolation) will experience associated negative feelings and sensations (hunger, discomfort and loneliness). Conversely, an animal experiencing favourable conditions (fresh air, fitness and ample sleep) will experience corresponding positive feelings and sensations (comfort in breathing, vitality and energy).

Using the five domains model involves examining a specific

range of conditions and determining how the animal is likely to be responding to these impacts. An overview of the collective impacts provides an understanding of where and how an animal's welfare is affected. While regulatory standards typically focus on minimising animals' negative experiences, the ZAA accreditation assessment framework also focuses on recognising and promoting positive experiences that enhance welfare.

The programme aims to support continuous enhancement of positive welfare for the animals cared for by members of the Association. With practice, these assessments become easier to undertake, build expertise and support continual improvement.

As part of the culture of continuous improvement additions to the accreditation programme for the next three year phase are being developed. The first ones will cover biosecurity and human safety when working with dangerous animals. Both of these additions, like animal welfare, will go beyond the minimum legislative requirements and will help to move the ZAA members forward into a proactive space. Like animal welfare legislation both health and safety and biosecurity are often seen as reactive legislation. By assisting ZAA members to have suitable processes and procedures in place the ZAA accreditation programme will help members to minimise their risks in these spaces.

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David Bayvel Award winner



Photo: Betagro

Australian veterinarian Kate Blaszak is the 2018 winner of the David Bayvel Memorial Award for Excellence in Animal Welfare. This award, given out every second year at the annual Science Week of the Australia and New Zealand College of Veterinary Scientists (ANZCVS), was

established in memory of David Bayvel, who had a long and illustrious career with the New Zealand Government, the OIE and lastly as Chief Veterinary Advisor for World Animal Protection (WAP). David was also a founding member of – and examiner for – the Animal Welfare Chapter of the College.

Kate Blaszak also works for WAP as their Global Farm Animals Adviser, having worked mainly in the Asia Pacific region. In addition, she represents WAP on both the International Coalition for Animal Welfare and the OIE Regional Animal Welfare Strategy advisory group. In what little spare time she has, she voluntarily contributes to an International Policy Forum and as Vice Chair of the board of AMRRIC (Animal Management in Rural and Remote Indigenous Communities). A major factor in Kate's selection for the award was the sheer number of animals impacted by her work. She describes her working life in the following article.

I started out virtually alone in our first Asian office in 2006, initiating a welfare training programme for veterinary

schools in Asia, many of which now include animal welfare in their curricula. In the field were various collaborations with dedicated local organisations in Thailand, Cambodia, India, Sri Lanka, Samoa, China and Indonesia on working equine or humane dog rabies and population management projects. Alongside public education, this involved the survey, sterilization, vaccination and treatment of tens of thousands of dogs. Of note is the comprehensive, community-based rabies prevention and dog population programme in Colombo, with Blue Paw Trust, which reduced dog bites and rabies in the Colombo Municipality and improved dog care, welfare and management. This project provided crucial learnings and evidence for the International Coalition for Animal Management guidance.

With prior experience with Agriculture Victoria, I have contributed to welfare policy and legislative change with several regional counterparts. I am a member of the OIE Regional Animal Welfare Strategy advisory group as well as the International Coalition for Animal Welfare, which represents many Animal Protection Organisations advocating for higher welfare to the OIE and its 182 member countries. There's a long path yet to practical change but I'm delighted to have influenced, with others, the recent adoption of the OIE technical pig chapter which globally encourages group housing of pregnant sows, enrichment for all pigs and pain management for piglets, amongst other areas.

Based in Thailand, I now offer technical solutions, strategic advice, field support, corporate and government engagement for global pig and chicken welfare campaigns and, in India, dairy. I am perhaps most proud of a pivotal 3-year collaboration with Betagro, a major pig and chicken producer in Thailand. Together we implemented routine welfare improvements for chickens and pigs on an unprecedented scale for farm animals in Asia. They have become the first producer to announce a phase out of sow stalls and farrowing crates, with a transition

to enriched group housing and farrowing pens. This has already impacted 10,000 sows, with a projected 250,000+ over the next 10 years. This has led to additional producer commitments to phase out sow stalls in both Thailand and China. Other direct impacts with Betagro relate to improved slaughter processes and the introduction of enrichment for broilers and all pigs, the phasing out tail docking and teeth clipping in pigs, and the first cage free hen system for the company; impacting in total over 8 million animals on farm to date. An outline of the pregnant sow housing example is included in WAP's business case for improving sow welfare, which demonstrates global commercial change. Along with our international team, I am determined to see key supermarkets and fast food retailers follow the lead of producers and respond to the consumer call for mainstreaming higher welfare.

These are ambitious goals and there is still much to do. Millions more sows to free from stalls and crates and layers from cages; relief for broilers from a lame life not worth living. To echo the United Kingdom's Farm Animal Welfare Council and Professor David Mellor, a life worth living must be achieved as a minimum for farm animals. I thank the ANZCVS Animal Welfare Chapter and members for this award. This further inspires me to continue the ongoing fight to improve the welfare of animals internationally.



Photo: credit World Animal Protection

Kate Blaszak
World Animal Protection Global Farm Animal Adviser

Dogs New Zealand (Dogs NZ) – Brachycephalic Working Group

The National Animal Welfare Advisory Committee (NAWAC) released its opinion on welfare issues associated with selective breeding in a diverse range of species in March 2017 after a period of consultation with stakeholders including Dogs NZ (formerly New Zealand Kennel Club). Dogs NZ received the final report and acknowledge that the volume of comment in relation to brachycephalic dogs reflects a high level of concern about the health and welfare of these breeds.

In response to these concerns, in May 2017 Dogs NZ set up a brachycephalic working group (BWG) with the specific aim of addressing NAWAC's concerns and to make a clear distinction between dogs whelped under the rules, regulations and codes of ethics as enforced by Dogs NZ and all other dogs.

The BWG was established with representatives appointed from Dogs NZ's four most numerically popular brachycephalic breeds being bulldog, French bulldog, pug and boxer. The four breed representatives are supported by four members of Dogs NZ's Canine Health & Welfare Committee (CHWC) including the Dogs NZ canine health & welfare veterinarian.

The Dogs NZ BWG set its mandate by extracting specific points from NAWAC's document to include: identifying diseases and conditions of concern; reviewing and/or developing testing methods and relevance to each breed; and then measuring and reporting incidence of diseases and conditions in conjunction with academia. The group will consider the number of caesarean sections that should be allowed per bitch and examine the influence of current breed standards on the welfare state of the dog. The Dogs NZ BWG will develop fit for function statements for each breed, and develop educational models for breeders and, equally as important, puppy buyers.

To date, there have been three key achievements.

- The BWG has developed a brachycephalic obstructive airway syndrome (BOAS) grading form using research with approval from Cambridge University (England). This simple to perform, 3-minute exercise tolerance test (ETT) can be completed by any registered veterinarian and grades dogs from 0 to 3 in increasing levels of BOAS affected states. It is important to categorise these dogs into levels because it provides breeders, veterinarians and puppy buyers with one measure of health in these dogs.
- Secondly, Dogs NZ has agreed to fund the purchase of a whole body barometric plethysmography chamber (WBBP) as the organisation's first major contribution to research. This chamber will be housed and utilised as part of a PhD on brachycephalic dogs at Massey University, and provide objective grading of BOAS by an independent specialist veterinarian in our (Dogs NZ) dogs when taken to shows in New Zealand. The WBBP chamber differs from the ETT in that it provides an objective result - whereas the ETT provides 4 levels, the WBBP will be on a scale from 0-100, allowing for a much more specific grading and a greater ability to place selection pressure for positive change.
- Thirdly, the CHWC recommendation on amendments to the bulldog breed standard have been accepted by the Dogs NZ Executive Council and is now being advertised to the membership at large, following due process. In effect the recommendation is that the current UK Kennel Club breed standard, which removes suggestions of extreme conformation, be adopted.

Utilising information from ETT and WBBP testing, in conjunction with academics and veterinarians, Dogs NZ will

be in the best position to confront NAWAC's concerns on breathlessness in brachycephalic breeds. Dogs NZ will be able to categorise its brachycephalic breeds into levels of BOAS affectedness and then develop a plan to address the current state. Dogs NZ will then be able to assess this each year to see if what is being done from the actions within the plan are working.

Addressing health and welfare concerns in brachycephalic dogs will require a collaborative approach between Dogs NZ, veterinarians, academia, and welfare agencies. This multifaceted approach will ensure that the impacts of this programme of work extend to an audience far broader than Dogs NZ membership.

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Tiki

Animal Welfare Emergency Management Update – September 2018

National and Regional Animal Welfare Plans

The Ministry for Primary Industries has commenced work on both the national plan and activation process of the animal welfare subfunction. The development of Regional Animal Welfare Plans is also underway. We have been assisting regional CDEM Groups with the writing of these plans. So far feedback has been very positive.

Regional Co-ordination

MPI is continuing to work on how regional co-ordination will look. In the meantime, we continue to undertake regional co-ordination roles.

Workshops and Regional Animal Welfare Groups

MPI has held workshops in Auckland, Waikato, Nelson, Marlborough, West Coast, Canterbury and Northland. These workshops assist in identifying regional hazards and impacts, along with what capacities and arrangements each region may have.

MPI is encouraging the establishment of Regional Animal Welfare Co-ordination Teams, with membership consisting of representatives from support agencies, and under these teams

individuals interested in assisting in an event could be involved. Membership would depend on what entities and individuals are in each Group's region. This ultimately is a decision for CDEM Groups to make, but we think it's a great concept.

MPI Animal Welfare in Emergencies Technical Reference document

The document is currently with MCDEM for final comments. Once finalised, it will be distributed to CDEM Groups and be available on MPI's website.

Animal Rescue Teams

The SPCA and Massey University have committed to continue to fund their National Rescue Team and Veterinary Emergency Response Team, respectively. Also a new animal rescue charity has been launched, called Animal Evac. We are planning a workshop for rescue groups in the first half of 2019.

We are also working on funding for training for animal rescue.

Factsheets to support planning and response

Online factsheets are being updated, and factsheets for volcanic eruptions, snow storms and heatwaves are being developed. See <https://www.mpi.govt.nz/protection-and-response/animal-welfare/animals-in-emergencies/>

Coming up

As current legislation does not provide recovery costs for animal welfare in emergencies, we are working with MCDEM to see how we can address this.

Codes of welfare – update on consultation, development and review since issue 25

Codes of welfare are issued by the Minister of Agriculture under the Animal Welfare Act 1999. Codes outline minimum standards for care and handling of animals and establish best practices to encourage high standards of animal care.

Issued by the Minister

- Temporary Housing of Companion Animals

In post-consultation process

- Dairy housing amendment

A complete list of the codes of welfare can be found on our website: <http://www.mpi.govt.nz/protection-and-response/animal-welfare/codes-of-welfare/>

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Codes of ethical conduct – approvals, notifications and terminations since issue 25

All organisations involved in the use of live animals for research, testing or teaching are required to adhere to an approved code of ethical conduct.

Codes of ethical conduct approved

- Lincoln University
- Veterinary Health Solutions

Notifications to MPI of arrangements to use an existing code of ethical conduct

- Agilis Vets Ltd (to use AgResearch Ltd's code)
- Ara Institute of Canterbury (to use Lincoln University's code) (renewal, code expired)
- BW & MB Partnership y (to use Lincoln University's code)
- Cropmark Seeds Ltd (to use Lincoln University's code) (renewal, code expired)
- Dairy Goat Co-operative (NZ) Ltd (to use AgResearch Ltd's code)
- Matthews, Lindsay (to use University of Waikato's code)
- National Trade Academy (to use Lincoln University's code) (renewal, code expired)
- New Zealand Agriseeds Ltd (to use Lincoln University's code) (renewal, code expired)
- Otakaro Pathways Ltd (to use Lincoln University's code) (renewal, code expired)
- PGG Wrightson Seeds Ltd (to use Lincoln University's code) (renewal, code expired)
- Synlait Milk Ltd (to use Lincoln University's code) (renewal, code expired)
- The New Zealand Merino Company Ltd (to use Estendart Ltd's code)
- Vetlife Ltd (to use Lincoln University's code) (renewal, code expired)

Amendments to codes of ethical conduct approved by MPI

- Nil

Minor amendments to codes of ethical conduct notified to MPI

- Nil

Codes of ethical conduct revoked or expired or arrangements terminated or lapsed

- Aakland Chemicals (1997) Ltd
- West Coast Vets Ltd

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Your feedback

We look forward to hearing your views on *Welfare Pulse* and welcome your comment on what you would like to see more of, less of, or something new that we have yet to cover.

Please send your feedback to us by emailing animalwelfare@mpi.govt.nz

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Welfare Pulse

Welfare Pulse is published electronically three times a year by the Ministry for Primary Industries. It is of special relevance to those with an interest in domestic and international animal welfare developments.

The articles in this magazine do not necessarily reflect government policy. For enquiries about specific articles, refer to the contact listed at the end of each article.

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