Ministry for Primary Industries
Manatū Ahu Matua

Welfare Pulse

Animal welfare in New Zealand and around the world

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Using animals for research, testing and teaching: challenge driving change

A physiological demonstration with vivisection of a dog by Emile-Edouard Mouchy (1802–1859)[1] pictured right, depicts teaching using live animals. Close examination of the picture reveals some interesting observations. The dog on the table is restrained and the obvious vocalisation suggests that it has not been treated to (effectively) alleviate pain or discomfort.

A second dog in the room – probably the next subject – is also restrained. It can see, hear and smell what is happening around it. It is also vocalising. Perhaps it is simply providing a chorus for the dog on the table; more likely, it is expressing fear because it senses that something "isn't right". While some of the observers are very close to the subject, two are looking away. Is that because they are indifferent, or because they cannot bear to watch? One observer (mid left) is watching tentatively

but perhaps hiding behind a colleague and yet another (back right) is watching, but from as far away as possible. Most obviously though, no-one appears to be looking at the faces of either of the dogs. Is it possible that there is an underlying sense of guilt that the animal is on the table?

The painting quite succinctly summarises the divergence of views on the use of animals for research, testing and teaching (RTT) – a conflict that we still struggle with.

Society allows the use of animals in many ways. For some, certain of those uses (e.g. the keeping of dogs as pets) are more palatable than others (e.g. using dogs in teaching). For others, no animal use can ever be acceptable. But, as a generalisation, the majority accept the use of animals, for whatever specific purpose – if that use is humane.

When we do use animals, there is potential to cause harm. By legislating and regulating we can prohibit some harms, demand justification for others (usually by requiring that any benefits from the use outweigh any potential harm to the animal(s)) and put in place an overarching obligation to mitigate harm. The New Zealand Animal Welfare Act 1999 acknowledges that we use animals in a variety of ways. Part 6 of the Act provides the specific legislative and regulatory framework that protects animals used in RTT.

We have come a long way in the nearly 200 hundred years since the scene above was painted. Thanks to ongoing critical review, societal opinion on the value and ethics of RTT using animals continues to evolve. Overarching the achievement of that change, the Three Rs (reduction, refinement and replacement), proposed by Russell and Burch in 1959[2], are accepted as founding principles when we use animals for these purposes.

Reduction minimises the number of animals that are used in a given study. For example, luciferase genes from fireflies and naturally glowing bacteria can be engineered into disease-creating bacteria to make the living organisms glow. That bioluminescence enables the movement and changes in numbers of the bacteria as they respond to drug treatment to be monitored over time within an individual animal. This eliminates the need to euthanase larger numbers of individuals at different time-points over the same period[3].

Refinement can frequently adopt a novel approach – for example, using blood-sucking insects inside artificial eggs, which are placed in nests thus enabling the nesting birds to be "blood sampled" without any human contact[4].

Replacement is often viewed as the best-case scenario, and new examples appear daily. Scientists have successfully bioengineered a working three-dimensional model of a left ventricle of the human heart[5], bringing them a step closer to the goal of creating a life-like model of a heart, which could ultimately help heart disease studies, drug testing and the development of patient-specific treatments for other heart conditions such as arrhythmia. As another example, machine-learning software trained on large databases of chemical-safety data, is so good at predicting some kinds of toxicity that it now rivals, and may outperform, more expensive animal studies[6]. However, it could be many years, according to an opinion in *Nature*[7], before government regulators accept computer results in place of animal studies.

The first paragraph of Chapter 6 in Russell and Burch's *The Principles of Humane Experimental Technique*[2], states; "*Desirable as replacement is, it would be a mistake to put all our humanitarian eggs in this basket alone. The progress of replacement is gradual, nor is it ever likely to absorb the whole of experimental biology. Refinement may reach such a pitch that a given procedure employing animals is absolutely humane, but in any given field there is bound to be a latent period before such success is attained. Moreover, we have suggested that reduction is desirable in any procedure, however directly humane, which employs large numbers of animals in one laboratory. For all these reasons, reduction remains of great importance, and of all modes of progress it is the one most obviously, immediately, and universally advantageous in terms of efficiency.*"

By applying the Three Rs we have made, and continue to make, change; which begs the question "will there ever be a time when animals are no longer used for RTT?" Perhaps that is a discussion for another day.

What we can do right now is consider how we might make a better life for those animals we do use in RTT and protect them from harm to the very best of our ability.

References

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3 https://academic.oup.com/jac/article/68/9/2118/783170
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The day I found a rat in the trap .... and it was still alive

What was that noise? It was the faintest of sounds, something I had never heard before. I decided to investigate. I jumped off my favourite climbing tree and walked around the garden. Where was it coming from? Walking towards the compost bin the sound was getting louder and quite unnerving. And then I found it – the trap Dad and I had set last night to catch the rat that had made our compost bin its favourite dine-in. And in the trap, still alive and screeching, was the rat. "DAAAAD!!!!" I yelled "Come quick! There is a rat in the trap! It is still alive!" Tears started running down my cheeks. I felt so helpless and angry. Dad had assured me that the rat would die quickly. "DAAAAD!!!!" I yelled again. "Come quick! It is in pain!"

Does this scenario happen often in backyards around New Zealand? We don't really know, but it might. Traps can be bought cheaply from many retailers including supermarkets and cut price retail shops ($2 shops and the like) and there is no guarantee that they are effective in killing the animals quickly and humanely. There is no requirement under the Animal Welfare Act that kill traps have to be tested or meet particular standards before being sold or used. This means any trap can be sold whether humane or not. Buyers may not be aware of this and may find themselves in a similar situation to the child in the above story.

The National Animal Welfare Advisory Committee (NAWAC) has established guidelines that enable the welfare performance (effectiveness and humaneness) of traps to be assessed in a standardised way. While the guidelines are not legally binding, NAWAC and the Ministry for Primary Industries (MPI) encourage testing of traps and also encourage people to use tested traps to minimise the chances of an animal suffering for a long time before dying. A variety of traps have been tested according to the NAWAC testing guidelines and a full list can be viewed at **https://www.bionet.nz/control/pests-under-management/performance-traps/**.

In light of New Zealand's Predator Free 2050 goal, a greater choice of humane, effective, user-friendly and affordable traps is required, in particular for rodent control. NAWAC and MPI are currently looking at commissioning research to test additional traps to address this issue.

While using humane traps is important, the welfare of trapped animals does not only depend on the type of trap used. Other factors to consider before embarking on the Predator Free 2050 journey include ensuring you know what you are trying to achieve and use the right technique and trap for the target animal, following instructions on traps, using the right bait and ensuring correct positioning of traps. When traps are used inappropriately, they can be inhumane and animals that manage to escape can develop trap shyness. In some circumstances it may be better to call in a professional pest control operator, especially if you do not think you could humanely kill an animal caught alive in a trap.

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For more information visit the following websites:

- **https://www.bionet.nz/**
- **https://www.mpi.govt.nz/protection-and-response/animal-welfare/traps-and-devices/**
- **https://www.doc.govt.nz/nature/pests-and-threats/predator-free-2050/toolkit-predator-free-2050/**
- **https://www.pmanz.nz/**

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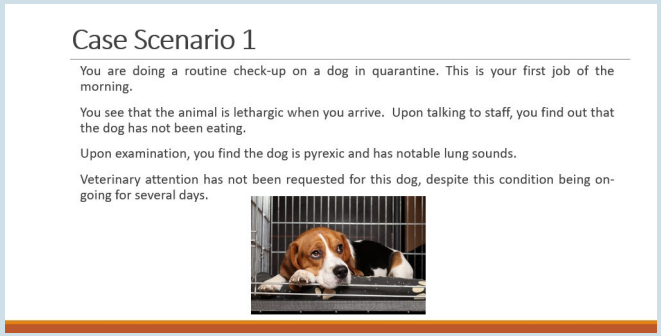
Regulation implementation – A Verification Services perspective

The 1 October 2018 enforcement date of the Animal Welfare (Care and Procedures) Regulations 2018 has been a few years in the making. The significance and positive welfare outcomes of these regulations are vital to New Zealand's animal welfare reputation. Their advent did not come without a significant workload across multiple branches of MPI.

Verification Services (VS) undertook the development of two e-learning modules focused on evidence gathering and the infringement process itself. This was made mandatory for all VS staff.

These modules were paired with countrywide training days for all establishment veterinarians. For the first time, the circuit verifiers, who audit in sectors such as layer hens, seafood and pigs, and live animal verifiers, who deal with animal imports and exports, also attended a tailor-made training day. The live animal verifiers were additionally trained to issue Section 130 notices. Each training programme consisted of a general overview of the regulations development, the regulations applicable to the verifier, compliance strategy and the infringement process, evidence gathering and case studies.



To ensure a consistent approach throughout MPI, training days were attended by staff from animal welfare policy, animal welfare standards, compliance and VS. A concentrated effort was made to ensure consistent messaging to everyone enforcing the new regulations. The training days were also an effective feedback from frontline staff to Wellington personnel directly.

To further improve implementation and ensure a consistent message, MPI joined with the New Zealand Veterinary Association to present to practice vets. Regional meetings were attended by VS personnel to present the regulations, including their impact on practice veterinarians, and to ensure consistent messaging.

The combined efforts of the multiple branches has led to a minimally stressful rollout of these new regulations.

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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 at:
animalwelfare@mpi.govt.nz

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To unsubscribe from email alerts follow the instructions at the link above.

Welfare Pulse

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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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Human behaviour change for animals

NZCAC Conference 2018

The New Zealand Companion Animal Council (NZCAC) hosted the 27th Companion Animal Conference in Auckland on the theme "Human Behaviour Change for Animals" in September 2018.

The NZCAC welcomed five keynote speakers pictured right. We also welcomed a range of other speakers from New Zealand and abroad, all of whom delivered fantastic talks relevant to our conference theme.

The conference attracted over 100 delegates, including veterinarians, veterinary nurses, policy makers, NGO representatives, and other animal welfare professionals and academics from around the world.

This conference marked the first time a contestable abstract stream was offered by the NZCAC. Another milestone was accreditation by the New Zealand Veterinary Nurses Association and recognition by the New Zealand Veterinary Association as fitting into the continuing veterinary education (CVE) category of continuing professional development.

The conference involved two full days of presentations, followed by a half-day workshop for invited delegates. Using the key principles of human behaviour change explored during the conference, the workshop analysed the five animal welfare issues and barriers to improvement most commonly identified by conference delegates. The scientific and practical challenges of effecting human behavioural change in relation to these five animal welfare issues were discussed in groups, and actions identified that would enable solutions to the issues.

The conference provided an opportunity for delegates to learn from leading animal welfare and human behaviour change experts, share their own knowledge, and network with others in the animal welfare field.

The 2018 Assisi Awards were presented during the conference dinner to two extremely deserving recipients, Gina Kemp (Technical Rescue Coordinator with the SPCA National Rescue Unit) and Pam Howard (Manager of Dogwatch Sanctuary Trust).

The NZCAC would like to thank our sponsors, speakers and all those who attended the conference and helped make it a success. We look forward to seeing you at the 28th Companion Animal Conference in 2020!

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Photo credit: Bianka Atlas.

Keynote speakers – from left: Dr Lynette McLeod (University of New England, Australia), Debbie Busby (HBCA, Clinical Animal Behaviourist, UK), Professor Peter Thornber (Commonwealth Veterinary Association), Dr Sara Dubois (BC, Canada SPCA) and Associate Professor Ngaio Beausoleil (Massey University).

Photo credit: Bianka Atlas.

Assisi Awards recipients – Gina Kemp (left), Pam Howard (right), NZCAC Chair, Barry Helem (centre).

Dubbing – a modern vestige of an ancient art to preserve bird health and welfare

The humble chicken, source of much of the world's protein, has had a long and interesting history – it was supposedly domesticated from the red jungle fowl primarily for its fighting abilities rather than its meat and eggs.

Although highly contested in some countries, cockfighting is illegal in many (including New Zealand). But the birds have continued to be bred true to type for exhibition or showing for the last two hundred years. And they have retained their "very pugnacious" nature, breeds such as Old English Game and Game Bantam being demonstrably more aggressive and more like the ancestral red jungle fowl than modern, heavy-breasted and fast growing meat chickens and highly productive layer hens.

These "fast and fierce" birds, described as having "spirit and determination" as well as "cascading feathers and dazzling colours", have an Achilles' heel – puberty. When young cockerels reach that age and fight, their wattles, earlobes and combs provide a hold to strike, injure and disable each other if not kept apart. And being well vascularised, they bleed, potentially resulting in severe injuries and death. Although they can be managed by keeping cockerels separately, inevitably, like bulls, stags and many other males, cockerels find ways to do battle, to determine dominance during the breeding season.

Dubbing – surgical removal of combs, wattles and earlobes – serves to leave no hold for fighting birds. It is also part of modern breed standards, a measure of reduced risk of injury and thus enhanced welfare. But it is a painful procedure, albeit one undertaken by breeders using local anaesthetic (a gel is used in preference to injection since it is easier to administer,

Cock fighting – A traditional sport in Tamil Nadu, India.
(By Amshudhagar, https://commons.wikimedia.org/wiki/File:Cock_Fight.jpg)

stings less and results in less bleeding). Combs, smaller and thinner than modern poultry, are clipped with surgical scissors and the head of the bird is dunked in cold, clean water to help contract the spongy, elastic tissues to slow bleeding.

Like many rare breeds of animals around the world, valuable genetic lines and strains are kept going by the enthusiasm and dedication of groups of individuals passionate about breeding and showing their gamebirds. They also know their birds and, in response to past regulatory demands to use pain relief, have explored using veterinarians and local anaesthetic injections.

MPI is developing new regulations for surgical and painful procedures. See **www.mpi.govt.nz** for updates.

However, costs, effectiveness and the birds associating show transport with the procedure, led them, with the assistance of a specialist avian veterinarian, to seek a better way. Using the anaesthetic gel – and having competent and experienced breeders performing the dubbing – appear to minimise the harms.

While dubbing, like any painful husbandry procedure, may be perceived as cruel, the breeding and showing community considers not dubbing inhumane (non-dubbed birds or those dubbed recently are unable to be shown). Breeders are well aware of the risks of natural aggression to health, welfare and survival on the infrequent but hazardous occasions when normal management practices fail to keep birds apart.

Poultry fanciers and their clubs and associations, aware of their long history and the potential for birds to be used in fighting, have a philosophy of always trying to do things better and working with others to do so. They want to ensure the continuation of these birds once revered by soldiers and athletes because of their nature.

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Modern gamebirds kept for breeding and showing in New Zealand. (Photo credits: Clinton O'Brien)

Great Mates Prison Programme

set to teach prisoners and greyhounds life skills

At Greyhound Racing New Zealand (GRNZ), rehoming of our greyhounds at the completion of their racing career and finding their "forever" homes is of highest priority. Greyhounds make great pets as they have a calm, gentle nature and are very affectionate.

GRNZ fund two key rehoming partners: Greyhounds As Pets (GAP) and Nightrave Greyhounds. These rehoming agencies do an incredible job. Over 500 greyhounds were rehomed in the last year and we aim to increase that number substantially, with more facilities being built at our Levin kennel base and new rehoming initiatives on the horizon. Often the dogs benefit from a bit of extra time in foster care where they get more one on one attention and a bit more time to transition from racing to a home environment. However, because of the irresistible nature of our greyhounds many foster parents end up being adopters resulting in a reduction in the number of foster homes.

Last year, GRNZ partnered with the Department of Corrections to develop a greyhound fostering programme and in May this year we launched a pilot of the Great Mates Prison Programme at Rimutaka. The aim of the programme is two-fold:

- to enhance our greyhound rehoming programme by teaching our greyhounds the skills needed to transition from racing to pet life before being rehomed;
- to provide the prisoners with an opportunity to gain valuable, transferable work and life skills and benefit from the human-animal connection, the goal being to both enhance their rehabilitation and reduce their risk of re-offending.

The idea originates from similar successful programmes in Australia and the USA. The prison environment provides a unique platform for assisting in the rehoming process,

Jack and Zandie arriving at the prison for the Great Mates Pilot Programme. Left to right: Jo Heath (Department of Corrections), Rachel Rae (Nightrave Greyhounds), Jan Voss (A.C.E. Dog Training Ltd), Mairi Stewart (GRNZ).

Jack learning to wait nicely for a treat.

Zandie learning lead manners.

Photo credits: Department of Corrections.

including a much-needed source of potential foster carers who have the ability to socialise and train greyhounds prior to adoption. The extra training and acclimatising the greyhounds can have in the Great Mates prison programme before adoption increases the likelihood that once a greyhound is placed, it will stay in its new home.

For the pilot, GRNZ set up temporary kennels, exercise yards and an area that simulates a home setting where the prisoners can spend time with the greyhounds. Each set of prisoners undertook an eight-week training programme – two sessions per week – with our Great Mates dog trainer.

Feedback regarding the pilot from the Department of Corrections was extremely positive. They have been pleased with the results and benefits, specifically around how it closely aligns with their therapy and rehabilitation programme. The stories from the individual men regarding

continued...

Play time for Jack.

the "life-changing" experiences and affection they had while working with the greyhounds are heartfelt. The programme provides a unique experience for the selected men to practise skills explored in the rehabilitation programme related to interpersonal communication, work ethic, emotion management, compliance with rules and structures, the development of empathy/care for another being, as well as other key treatment goals. Before Graduation Day, the men are assessed for the DogsNZ Canine Good Basics certification and both greyhounds and prisoners leave the programme with certificates.

In November last year, GRNZ and the Department of Corrections rolled out the joint programme permanently. We are currently making plans to build kennel facilities within the unit. We are also looking into expanding the programme to other prisons so that more of our greyhounds and prisoners can benefit from this exciting programme.

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How to wrestle with a pig?

Someone once said to me "Engaging with the trolls of social media is like wrestling a pig. If you are going to do it, you need to accept that you will both end up getting dirty."

Sources of information from social media increasingly lead opinion and influence our lives. Politics is littered with the debris of "fake news", and internet trolls who add their comments to blogs and chat rely on gullibility to gain followers and promulgate false information. Proof of facts has lower priority than creation of sensation, and veracity is measured by the number of views and the quantum of followers. As misinformation becomes predominant, it creates doubt about information gathered by our traditional scientific approaches, and can influence societal ethical concerns and promote changes that are not always justifiable.

NAWAC and NAEAC, New Zealand's two animal welfare advisory committees, are obliged to deal with verifiable facts. The Animal Welfare Act requires that NAWAC have regard to good practice, scientific knowledge and available technology in their work. Science makes a central contribution, as it brings rigour and objectivity to the method, and the committee is required to examine all available facts when weighing the evidence to develop an opinion. This provides a solid basis for subsequent policy development.

In making its decisions, NAWAC must also consider public position and society's ethical standards, and this part of the process can be difficult, especially where misinformation starts to direct societal opinion. While some views can be readily set aside as capricious, those that have wider acceptance may begin to influence decision-making, achieving the outcomes that those seeding misinformation seek.

In the coming months, NAWAC and NAEAC will be reviewing their communications policies. While this is primarily intended to increase the transparency of committee processes and decision-making, it also raises the question of whether there should be a targeted effort to counter the deliberate spread of false information. Is there an obligation, in the public interest, to respond to social media with science-based information and counter-arguments? And how do we protect those engaged in such an affray – what are the rules of engagement if we agree to wrestle the pig?

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World leading animal care for the dairy sector

What does world leading animal care look like? This is the question DairyNZ (DNZ) is asking those with a vested interest in how our dairy cattle are treated.

As part of our co-leadership of Commitment 4 of the Dairy Tomorrow strategy – "We will be world leading in animal care" – DNZ is developing and implementing a framework that ensures every animal is valued and treated with care and respect. We have looked at existing frameworks and will be engaging farmers to develop a fit for purpose New Zealand dairy cattle welfare framework.

Jac McGowan, DNZ Animal Care Team member, having a hug with one of her cows.
Photo credit: Jac McGowan.

Over the past 15 years the dairy sector has taken significant steps towards being more sustainable, but with the global and local operating environment changing at a rapid pace, there is more to be done. Stakeholders collaborated to refresh the dairy sector strategy – Dairy Tomorrow – making New Zealand dairying sustainable and responsible, while recognising the importance of being transparent and open (**https://www.dairytomorrow.co.nz/**). There are six commitments within the strategy and the DNZ Animal Care Team and Dairy Companies Association of New Zealand (DCANZ) are leading Commitment 4.

Commitment 4: We will be world leading in animal care	
Goals	•Develop and implement a framework that ensures every animal is valued and treated with care and respect.
	•By 2023, achieve all farmers implementing and reporting under the framework.

A working group established in late 2017 agreed that a definition for "world leading animal care" was needed. Not a straightforward task considering the range of views people have around animals and how we care for them. To ensure the definition is credible and inclusive we are engaging with farmers, the public, and animal welfare scientists to incorporate the views of each of these groups into the definition.

Another area of work investigated what animal welfare frameworks are being used globally. An international scan has highlighted the progress that many other countries have made in creating schemes aimed at assuring the level of animal care being provided. By engaging with a number of organisations running these schemes we have gained an appreciation of what has and what hasn't worked.

The work so far has been an important starting point, but there is a lot to be done to meet the 2023 goal. If you have ideas on how you could, or how you are, influencing better care of dairy cattle, we would like to hear from you and build these ideas in to the work plan. It will take all those influencing the care of dairy cattle working together to achieve the goal of being world leading in animal care.

Katie Saunders
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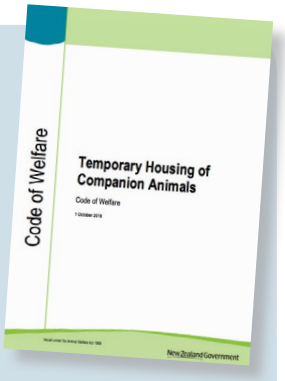
Code of Welfare for Temporary Housing of Companion Animals issued



Anyone caring for companion animals in temporary housing facilities will be interested in the Code of Welfare for Temporary Housing of Companion Animals which came into effect 1 October 2018.

The code sets minimum standards of care and recommended best practices outlined for animals in temporary housing facilities.

It was issued by the Minister of Agriculture on the recommendation of the National Animal Welfare Advisory Committee (NAWAC).

The code applies to animals in temporary housing facilities such as boarding facilities and kennels, pet shops, animal welfare centres and pounds, animal day-care centres, grooming establishments and quarantine or isolation facilities.

NAWAC Chair, Dr Gwyneth Verkerk, says this is the first code that explicitly outlines what is required from facilities that provide temporary housing for companion animals.

"The code applies to companion cats and dogs, as well as companion animals that are not covered by an existing species-specific code of welfare, such as guinea pigs, rabbits, mice, rats, fish and turtles."

It offers practical information and minimum standards and recommendations for best practice relating to all aspects of keeping companion animals in temporary housing facilities, including provision of food and water, temperature and lighting, air and water quality, behaviour, health and disease, and sale or rehoming.

The aim of the code is to encourage all those responsible for the welfare of these animals to adopt the highest standards of husbandry, care and handling. It is expected the code will be used as a guide for best practice.

The code will give assurance to pet owners that the physical, health and behavioural needs of their animals are met and any pain and distress are alleviated while in temporary housing facilities.

The code was drafted by a group convened by the New Zealand Companion Animal Council. NAWAC considered views by representatives of animal welfare organisations, the pet industry and members of the public before recommending the code to the Minister of Agriculture for issue.

Copies of the code and the explanatory report that accompanies it are available online at **mpi.govt.nz/welfarecodes** or by emailing **animalwelfare@mpi.govt.nz**

DOC online resources improve welfare outcomes for wildlife

Managing welfare of sick or injured wildlife has its own set of interesting problems, one of which is the great diversity of species we work with. When we look to the internet for help, it can be hard to know which sites to trust and which to scroll past.

Based on feedback from the wider veterinary and wildlife rehabilitation community, the Department of Conservation (DOC) decided to produce our own set of online resources to help set the standard.

Under approval of the DOC Animal Ethics Committee and using videos, text and a broadcast of New Zealand native species, we developed eight online modules to demonstrate common techniques used by vets, vet nurses and wildlife rehabilitators to treat wildlife.

These are on the DOC website, freely available and can be used over and over again. So now you know where to go when you need to know more about how to crop tube a kereru, take blood from a tui or bandage a bellbird!
doc.govt.nz/wildlifehealth

The online modules were based on the most common techniques needed for avian wildlife rehabilitation work, and cover bird handling and stress reduction, physical examination, crop tubing, blood sampling, swabbing, bandaging, subcutaneous fluids and necropsy techniques.

Apart from two volunteer pet chickens (who received lots of treats), all filming was undertaken as part of the day-to-day treatment of these wildlife patients in the clinic. Wildbase Massey University and Te Kōhanga/The Nest at Wellington Zoo kindly allowed access.

The videos are very popular with users, with one commenting that seeing it is so much better than reading about it! And each module also has a pdf Fact Sheet which can be printed for future reference. Filming was carefully managed to minimise disturbance of these avian patients.

Within DOC, we have seen the benefits almost immediately. When hands-on training is undertaken, the relevant module must be completed ahead of time. This has resulted in more effective training, more confident staff, and better welfare outcomes for the patients. Feedback from the

continued...

Photo credit: Brent Tandy, DOC.

Injured native wildlife, like this kotare/kingfisher, are often presented for rehabilitation.

The modules contain great up close views – like the inside of this kiwi's mouth!

Photo credit: Genevieve Spargo, DOC.

veterinary profession has been very positive and great value is seen in having these modules readily available across the conservation and welfare community. Wildlife rehabilitators, often working in remote locations with little assistance, now have a resource developed specifically to support their work.

By providing quality online resources, we are not only setting a benchmark for how we manage the welfare of sick or injured wildlife, but we are also providing support to the community which undertakes this work, as well as demonstrating that we value animal welfare and our wildlife.

Kate McInnes & Janelle Ward
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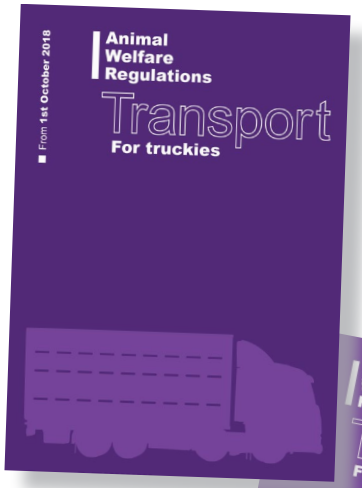
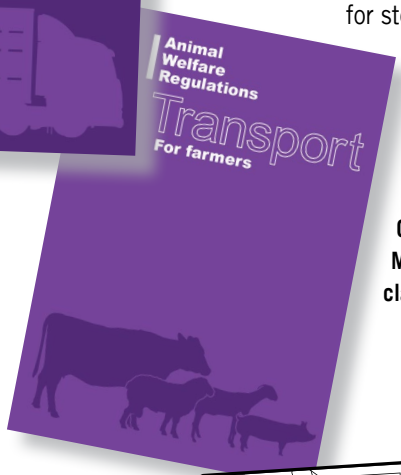
Photo credit: Genevieve Spargo, DOC.

DOC Vets Kate McInnes and Janelle Ward prepare the set for filming the online modules.

Livestock transporters hitting the road running

Stock transporters have turned out in droves to learn about how the new animal welfare regulations could impact their work. Some operators were so impressed with the straightforward information, they arranged additional meetings so all of their drivers could attend.





Leonie Ward, Manager Animal Welfare Sector Liaison travelled the country in the lead-up to the regulations becoming effective and has given presentations from the Far North down to the Deep South, as well as at the Road Transport Forum Annual Conference in Dunedin, where the Forum presented Leonie with an award for her commitment to the livestock transport community.

Mark Clements from Waitoa Haulage attended the Hamilton presentation and wanted to ensure all of his drivers, and any others he could entice, got to hear the message. So he organised his own meeting in Morrinsville to which all of his drivers came, as well as a couple of farmers and stock agents.

"Paper was just not working for us," Mark said. "We needed a personal message, because we are looking for the right way to operate and we don't want to be the carrier of everyone else's problems."

The feedback from the meeting from all who attended was positive, and they had some useful suggestions for Leonie to take back to Wellington.

"This is the culmination of six months of engagement with industry to help truckies know the requirements, know their responsibilities and help them educate farmers too," says Leonie. "These are not new requirements, but having a fine attached has certainly changed behaviours. The meat works are not a dumping ground for stock in very poor condition, and a key link in the supply chain is now well educated about the issues."

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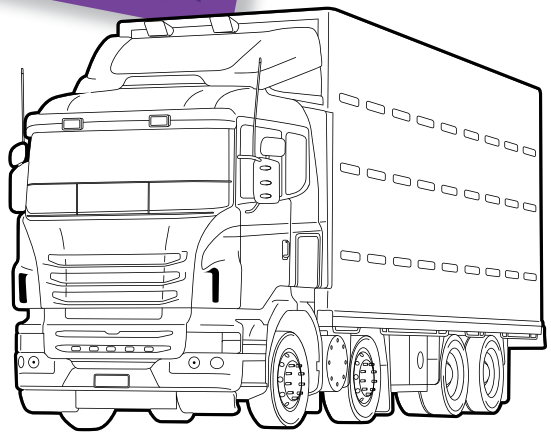

For more information about the regulations go to **www.mpi.govt.nz/animalregs**

Equestrian sports dressage supports Horse Welfare Code

Equestrian Sports NZ Dressage (ESNZ) rules have recently been amended by the annual conference and national committee. This is to add clarity for competitors and officials as to what constitutes a horse noseband that may be considered "too tight" in ESNZ Dressage warm up arenas and competition arenas, and may therefore affect the welfare of the horse.

Taking into consideration the findings of overseas studies in respect of the effects of tight nosebands, Dressage NZ moved that the national rule should require the tightness to be measured on the front of the nasal midline rather than on the side of the cheek thereby determining a more accurate measure of the tightness.

"The Dressage New Zealand Committee were unanimous in its view that the previous rule, which required the noseband to be loose enough to fit one finger under the nose band on the side of the face, was not adequate to prevent nosebands being fixed so tightly that they may cause harm," said Scott McKenna, Dressage NZ technical officer.

Officials may either use a standard taper gauge, a measure consistent with an average human finger, or use a manual check. Stewards are carrying out checks at events and monitoring the effects of this new rule.

It is also encouraging to note the availability of many new types of bridles and nosebands anatomically designed with the comfort of the competition horse paramount.

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New appointments

The Minister of Agriculture has appointed Ms Ruth Palmer and Dr Ingrid Visser to the National Animal Welfare Advisory Committee.

Ruth Palmer was appointed to the committee as a layperson and replaces Frances Russell who resigned in 2017. As well as her commitment to companion animals, Ruth has a keen interest in conservation. She lives in the "halo" of Zealandia and welcomes the return of the native bird population to Wellington. She is active in pest control and management in the area. She and her partner also have a small holding in Otaki that includes a portion of a DOC covenanted wetland – Te Otepua – the wetland is actively managed by the private landowners with the assistance of GWRC and KCDC. Te Otepua is of regional significance and provides habitat for threatened and indigenous birds. Horses, a lifelong interest of Ruth's, and a small number of sheep and cattle are also run on the property. Ruth has had a long career in the public service and is a specialist in public sector management and in social and community policy.

Ingrid Visser was appointed to provide the committee with knowledge and experience of animal science and animal welfare advocacy. She replaces Ingrid Collins MNZM who also resigned in 2017 after serving five years on the committee. Ingrid has researched marine mammals from the Antarctic to the Arctic as well as in New Zealand, where she founded the Orca Research Trust (www.orcaresearch.org). She is the co-founder of Whale-Rescue.org, an NGO established to help whales and dolphins stranded and entangled around our coastline. She has investigated welfare concerns for captive cetaceans (whales, dolphins and porpoises) around the world as well as the issues of using animals in entertainment. Her research has led her to speak before international government inquiries, legislative hearings and court cases as an expert. She is on the Board of Directors of a number of NGOs and coalitions all striving to improve welfare for cetaceans and promote effective research.

The link between animal welfare and farmer wellbeing

Animal production is experiencing an age of enlightenment. While growing populations in certain areas of the world are wanting more protein-rich diets, others are opting for plant-based.

The global commonality though is the increasing insight into the commercial realities of livestock farming. It is no longer acceptable just to produce large quantities of healthy animals. Customers want welfare – they need to know the animal has had a good life, positive welfare experiences, a happy farm environment. Farming without compassion is simply not sustainable.

In 2012, I was awarded a Nuffield Farming Scholarship. My topic was "Inspection visits of value: welfare of man and beast". My objectives were simple – to discover ways of improving relationships between inspectors/assessors and farmers, and to establish the value of improved welfare codes and standards for the benefit of both farmer and stock. My main driver was welfare, predominantly, animal welfare. However, I had realised that to improve animal welfare standards, especially those of farmed animals, I needed to change my mindset and explore how improved livestock welfare could lead to improved farmer wellbeing. And vice versa!

Whilst in Eastern Europe, I visited two dairy farms that highlight the connection perfectly. Cows were housed on both farms, but in one the cows were tethered. Here, both cows and staff appeared lacklustre. Cattle health was poor; mortality, lameness and mastitis levels were high. A three-year-old downer cow was hydraulically dragged onto a truck whilst the staff just stared blankly after her. No joy in their work, and a reluctance to spend time with the stock, especially those that were suffering, as they felt powerless to intervene. They had become disconnected.

The other farm, although indoor-housed and similar in scale, was completely different. The manager had motivated the staff by conducting trials. Different bedding materials and enrichments were enjoyed by the cows and by the staff proposing them. The work environment was cheerful, busy, with a keen interest in the animals' behaviour and how that affected their health and productivity.

In 2016, FAWC published an opinion on the links between the health and wellbeing of farmers and farm animal welfare. One of the conclusions was that there is a need for a greater awareness and recognition of farmer wellbeing, the factors that might affect it and the possible consequences for animal welfare. One of the recommendations is that those who visit farms should be encouraged and enabled to communicate with relevant organisations if they feel there is a problem. One such organisation in the UK is FCN, Farming Community Network, for which I am a volunteer. I have witnessed depressed farmers literally at the end of their tether, unintentionally causing suffering to those they are responsible for. Collaboration with stakeholders – vets, Trading Standards and RSPCA – is crucial to halting such decline and helping both farmer and stock recover.

Farm assurance schemes and government inspectors all have a role to play in taking a more holistic approach to inspections, and keeping firmly in mind the intrinsic link between the health and welfare of all parties. Offering education and advice to farmers on meeting welfare standards and legislation is important, but what really makes the difference is instilling a desire to improve, and sharing the myriad of benefits that these improvements can produce.

Recently, I visited an RSPCA Assured free range turkey unit and abattoir. Although the turkeys have access to woodland and plenty of natural enrichment, the staff enjoy watching them play, and have introduced items like brightly coloured glockenspiels that the birds can peck away "creating" a tune. This business thrives, staff retention and satisfaction is considerable, the birds' welfare is improved because they

receive constant attention, with regard to their quality of life. The workers in this abattoir have respect and take pride in the knowledge the birds have had a good life.

Good animal welfare improves job satisfaction, gives a sense of pride and peace of mind that the best is being done for the animals. It's common sense to abide by legislation and standards, to rear healthy animals. It's good business sense, ethical and sustainable, to raise and promote welfare standards. And it makes sense to show compassion and kindness, beneficial to both mental health and wellbeing. It is the decent way to work and live.

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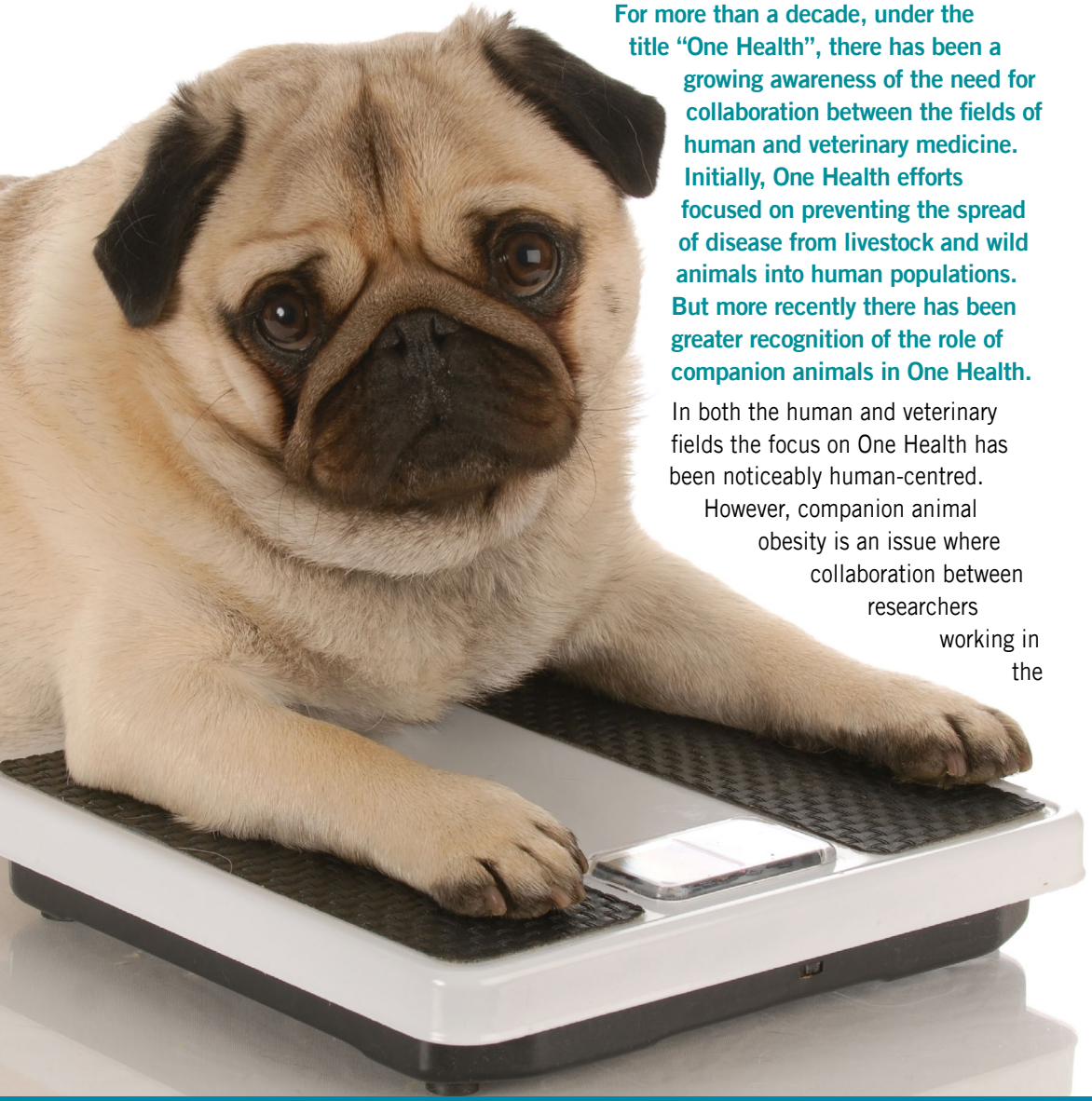
A One Health perspective on canine obesity



For more than a decade, under the title "One Health", there has been a growing awareness of the need for collaboration between the fields of human and veterinary medicine. Initially, One Health efforts focused on preventing the spread of disease from livestock and wild animals into human populations. But more recently there has been greater recognition of the role of companion animals in One Health.

In both the human and veterinary fields the focus on One Health has been noticeably human-centred. However, companion animal obesity is an issue where collaboration between researchers working in the fields of human and veterinary medicine, can lead to better health and welfare for both humans and animals (Sandøe et al. 2014).

In dogs, as in humans, obesity is a multifactorial problem. I will here focus on the owner-related risk factors. Studies have confirmed a relationship between obesity in dogs and their owners: if the owner weighs too much, it is more likely that the dog will also be overweight or obese. A similar phenomenon is found in the relationship between humans – between, for example, parents and children. Secondly, studies seem to indicate a link with owner's social status: the lower status the owner has, the more likely it is that both the owner and the companion will weigh more than is healthy.

These two findings reflect the well-documented but complex relationship between obesity and low social status in humans, and it is not surprising that habits and limitations in people's own lives influence the ways in which they view and treat the animals in their care.

Just as one would like to think that very few parents intentionally allow their children to become obese, it seems unlikely that many dog owners intentionally compromise the welfare and health of their companions by overfeeding them. Rather it seems that owners of obese dogs may overfeed as the result of a number of factors, some of which they have limited control, much in the same way as they are drawn into overfeeding themselves and their children.

Linked to this, in the same way that parents of overweight children systematically underestimate their children's weight, a number of studies have shown that owners of overweight or obese dogs underestimate the body condition of their animals. Furthermore, practising vets may fail to identify overweight animals.

The number of studies on the social and psychological mechanisms underlying the way people feed their companion animals remains small, and further factors are likely to be identified as new research is undertaken. However, what is abundantly clear from these studies is that we cannot hope to understand canine obesity without also knowing more about human obesity, the health and social status of owners, and the relationships that owners have with their dogs.

It is also clear that solutions to the growing problem of canine obesity will be solutions that enable dog owners to develop a healthy lifestyle for themselves as well as for their companions.

Reference

Sandøe P, Palmer C, Corr S, Astrup A, Bjørnvad CR. *Canine and feline obesity: A One Health perspective.* Veterinary Record 175, 2014: 610-616.

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Technology and the anxious sheep midwife

Sir Mont Liggins is internationally recognised as a pioneer researcher for the management of preterm birth. Mont used steroid exposure in ewes to cause premature birth and lung maturation in lambs. His discoveries have had a huge impact on preterm human infant survival.

At the University of Auckland's Liggins Institute we have carried on this sheep-based research into human premature birth at our facility south of Rotorua, in a custom-built sheep feedlot.

Sheep are specially acclimatised to a complete pelleted diet for two weeks before entering the feedlot and premature birth is not induced for another 10 days. The individual pens are large enough to allow a singleton-bearing ewe to move around and have enough space for birthing. These sheep have at least 3 ultrasound scans! With premature birth, lactation can often be perturbed and premature babies require extra nutrition to support their growth. Consequently, babies receive nutritional supplements during early postnatal life. Prematurely born infants also have a higher risk of developing diabetes later in life and we think that the qualitative aspect of the supplementary diet may affect this risk. To make matters even more complex, it is very likely that boy and girl infants may do better with supplements of different compositions. For this reason our sheep work uses both sexes of lamb. Colostrum may also be of limited quality and quantity and we control for this by giving lambs commercially available sheep colostrum in addition to mum's.

Out they pop! Lambs born during light hours (top) and dark (bottom).
Photo credit: Eric Ai.

Premature induction usually results in lambs being born during the middle of the night, two days after induction. Premature lambs sometimes need special care with issues like establishing feeding. This means the research team are regularly checking on the ewes for signs of labour in case they need to assist. However, disturbing the ewe with lights and noise during the monitoring of labour is not optimal for her welfare, or those of her neighbours.

For the last two years we have trialled infra-red camera stations that allow staff to remotely monitor labour and birth without constantly disturbing the ewes. The signals are transmitted wirelessly to a local router and then to network-linked laptops or even cell phones. The images are remarkably clear (see photos) and include an audio feed that can help us detect ewe vocalisations and the bleat of a newly born lamb. This means that if a birth appears to happen without prolonged labour we can allow the ewe to start to groom and bond with her lamb without our interference. It is good for the ewes and lambs but also for the caffeine-loaded staff member watching in an adjoining part of the building.

The camera and microphone monitoring will now become a standardised operating procedure for our future work in prematurely born lambs.

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Massey-SPCA desexing clinic receives 2018 NAEAC Three Rs award

The Massey-SPCA Desexing Clinic has been selected as this year's recipient of the inaugural Aotearoa New Zealand John Schofield Three Rs Implementation Award.

The Three Rs are guiding principles for the ethical use of animals in research, testing, and teaching. "The Three Rs promote the reduction and replacement of animals used in research, testing and teaching, and the refinement of experimental techniques to minimise pain or distress," says NAEAC Chair Grant Shackell.

"I am delighted to announce that the winner of this year's implementation award is the Massey-SPCA Desexing Clinic. The clinic has achieved a number of successful outcomes since it was launched over a year ago.

There has been a reduction in the number of animals used for clinical training. The desexing programme has had a positive animal welfare impact, reducing the number of unwanted kittens. The clinic has also helped to raise awareness of the Three Rs.

Veterinary students from Massey University gain essential clinical experience while providing a valuable low-cost service to the community. Over the past year, 56 clinics have been held, over 225 students have been trained, and over 560 cats have been desexed. The programme has substantially reduced the intake of cats at the SPCA."

Working in partnership with SPCA Palmerston North and the Massey University Veterinary Teaching Hospital, the clinic was launched in August 2017 by Dr Carolyn Gates, senior lecturer in veterinary epidemiology.

Dr Kat Littlewood, a volunteer veterinarian at the clinic and postgraduate student at Massey's School of Veterinary Science, received the $5000 award on behalf of the clinic.

This is one of two awards launched by NAEAC in July last year.

Photo credit: Grant Shackell

Kat Littlewood, on behalf of the Massey-SPCA Desexing Clinic, receiving the NAEAC Three Rs Award from Grant Shackell, Chair of NAEAC.

Applications for the Aotearoa New Zealand Three Rs Research Grant have been extended until **14 April 2019**. For more information: **www.mpi.govt.nz/3rs**

The awards are funded by AgResearch Ltd, the Australian and New Zealand Council for the Care of Animals in Research and Teaching, Lincoln University, Manaaki Whenua Landcare Research, Massey University, University of Otago and Victoria University of Wellington.

NAEAC is a statutory committee established under the Animal Welfare Act 1999 to provide independent advice to the Minister responsible for animal welfare on issues relating to the use of animals in research, testing and teaching. NAEAC actively encourages the application of the Three Rs principles in research, testing and teaching.

Applications for the Aotearoa New Zealand Three Rs Research Grant have been extended until 14 April 2019.
For more information: www.mpi.govt.nz/3rs

Codes of welfare

– update on consultation, development and review since issue 26

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.

In post-consultation process

- Dairy Housing Amendment

A complete list of the codes of welfare can be found on the **MPI website**.

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Codes of ethical conduct

– approvals, notifications and terminations since Welfare Pulse issue 26

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

- AgResearch Ltd
- Auckland Zoological Park
- Landcare Research NZ Ltd
- NZeno Ltd
- Massey University
- Schering-Plough Animal Health Ltd
- Toi Ohomai Institute of Technology

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

- Abacus Biotech Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Ag Challenge Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Agilis Vets Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- AgriHealth NZ Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Alltech (NZ) Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Animal Breeding Services (2007) Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Aroa Biosurgery Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- B+LNZ Genetics (to use AgResearch Ltd's code)
- Cognosco, Anexa Animal Health (to use AgResearch Ltd's code) (renewal, code expired)
- CuroNZ Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Dairy Goat Co-operative (NZ) Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Dairy Production Systems Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Disease Research Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Donaghys Ltd (to use PharmVet Solutions code)
- Eurofins Animal Health NZ (to use University of Waikato's code)
- Flint, Pania (to use AgResearch Ltd's code) (renewal, code expired)
- Intuit Regulatory and Marketing Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- K9 Medical Detection New Zealand Charitable Trust (to use AgResearch Ltd's code)
- Lawrence David (to use AgResearch Ltd's code) (renewal, code expired)
- Livestock Improvement Corporation (to use AgResearch Ltd's code) (renewal, code expired)
- ManukaMed Limited Partnership (to use AgResearch Ltd's code) (renewal, code expired)
- New Zealand Institute for Plant and Food Research Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- New Zealand Leather and Shoe Research Association (Inc) (to use AgResearch Ltd's code) (renewal, code expired)
- North Canterbury Veterinary Clinics (to use AgResearch Ltd's code)
- NZ Auto Traps Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- On-Farm Research Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Techion Group Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- SBScibus Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- SciLactis Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Synthase Biotech Ltd (to use AgResearch Ltd's code) (renewal, code expired)
- Unitec Institute of Technology (to use AgResearch Ltd's code) (renewal, code expired)
- Wildland Consultants Ltd (to use Landcare Research New Zealand Ltd'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

- Invetus NZ Ltd
- Massey University

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

- Aloe Vera NZ Ltd
- AsureQuality Ltd
- Eurofins AgroScience Services NZ Ltd
- Invetus NZ Ltd
- New Zealand National Fieldays Society Inc
- Taihape Veterinary Services

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