



Welfare Pulse

Animal welfare in New Zealand and around the world

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The best thing about being a sheep? They have rights!

Battling for young minds, or understanding and making use of their insights.

“Never work with animals or children”, one of WC Fields’ (1880-1946), the American comedian, actor and writer, most well-known statements. But how an animal fares depends much upon people, and the future of the relationship between animals and people belongs with the younger generations – our children, students and young adults. The animals most of us are exposed to are our pets, more members of the family, than real animals living and dying. This raises questions over why and how animals are represented. In *Where’s My Cow?* – a book for people of all sizes – the late Terry Pratchett asked “Why is Young Sam’s nursery full of farmyard animals, anyway? Why are his books full of moo-cows and baa-lambs? He is growing up in a city. He will only see them on a plate! They go sizzle!” Is there a need to connect people with animals?

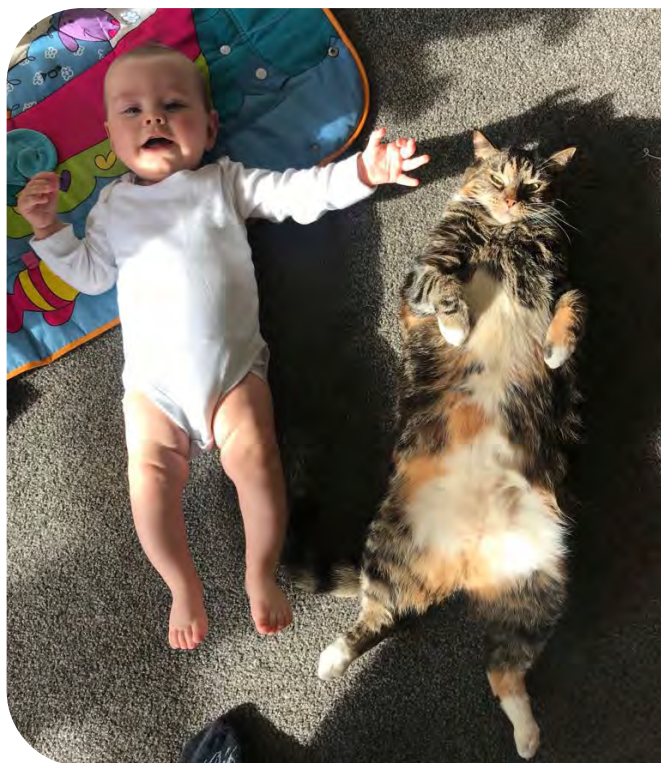
Exposing children to wildfowling, or shooting of ducks, brought parent accusations of the teacher traumatising children – “we have a [supermarket] – people don’t need to walk around killing animals to survive any more”. However, and as the UK newspaper columnist claimed, perhaps we cannot eat an animal without participating in its death, whether it gets “hooked out of a river, blasted out of the sky or strung up by its ankles and electrified before having its throat slit”. While there are advantages in letting others do the slaughtering, allowing children to grow up not associating meat with an animal’s life and death is failing to expose them to the reality of, and responsibilities for, the natural world.



Photo: Isabelle Crawshaw

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Photo: Valentine Taylor



Organised possum hunt competitions are frequently a source of community funding for some New Zealand rural schools. As well as contributing to the removal of pests, children are taught about firearms safety and environmental conservation. However, the involvement of children in killing animals is seen by some as risking the development of their empathy and compassion for living things. Similarly, others have raised the possibility of having age limits on undertaking painful husbandry procedures, such as tail docking lambs, a practice many children grow up with.

In all this apparent “battle for the minds of the young” we should not forget that students have a consistent and compassionate attitude towards animals, and care about their welfare, though often seeing responsibility as belonging to

others, such as farmers and governments. And they may have invaluable insights shaping the future of animal welfare policy. For instance, a recent animal welfare module in a competition aiming to “inspire and educate” young people about the sheep industry, asked the 8-15 year-olds a number of questions designed to make them think. Some of the answers are insightful. What is the best thing about being a sheep in New Zealand: having freedom; being out in a paddock when you want to be; and that they have rights. The last response, by far the most common, and a belief shared by many adults, seems at odds with those academics and policy-makers who emphasise the difference between animal rights and animal welfare stances. And what is the best way to encourage people to look after their animals: encourage them to think from the animal’s perspective and to realise animals have feelings and emotions just like us; lead by example; and give them money. Young people know animals are sentient and understand the need to encourage people to treat them properly, including providing financial reward or incentive for doing so, sentiments at the foundation of maintaining and enhancing animal welfare.

The relationship between animals and humans is long, diverse and often special. While we cannot live without having some sort of impact on them, it is also difficult to imagine what sort of a world it would be without them. In accepting that, then empowering people to care for them is imperative. Providing them with the time, resources and confidence, especially younger generations, to develop the skills and empathy that enable and support the relationships society deems acceptable. The challenge is to connect in ways which align with the future we want, whether predator-free, knowing where your food comes from, or supporting those responsible for the care of animals. Reaching consensus on such important and complex relationships demands we use all our ways of knowing and consider all perspectives – acknowledging and engaging the views of children and young people may prove the more invaluable in time.



Photo: Mark Fisher

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Further information

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Young carnivores should be taught the truth. J Lewis. *The Telegraph*, 1 December 2011.

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Future Sheep New Zealand. [Facebook.com/futuresheepnz](https://www.facebook.com/futuresheepnz), 2019.

Animal welfare update from the OIE

In today's busy world we need to remind ourselves to look back on what we've achieved, rather than tick the milestone box and move on to the next task in a long list. After three years as Deputy Director General, International Standards and Science, at the World Organisation for Animal Health (OIE), the offer from the *Welfare Pulse* editors to provide an article seemed a good opportunity to do just that.

Those three years also correspond to the time since the OIE's 4th Global Conference on Animal Welfare in late 2016, when we consulted on the OIE Global Animal Welfare Strategy, which was subsequently adopted by the OIE World Assembly in May 2017. Our core role as an international standard setting body has seen the continuation of our work programme to develop standards for animal production systems. The standards for pig production systems and for killing of reptiles for skins, meat and other products have been added to the growing list of sector-based welfare standards. In addition, we are currently making good progress on the standards for layer hens, which are attracting high interest and strong engagement from our Members and partners. The completion of the ISO/TS 34700:2016, which provides requirements and guidance for the implementation of the animal welfare principles, also marked an important milestone, and we are continuing our collaboration with the private sector to explore mechanisms to remove barriers and support implementation of these production standards and their uptake into assurance schemes.

The international standards for slaughter of animals and killing for disease control purposes (OIE Code Chapters 7.5 and 7.6) have come under focus as a result of the ongoing African Swine Fever (ASF) epidemic. Those standards are currently under review by expert groups before being presented to our Members for consultation, but they provide an interesting example of how we can continue to provide support with implementation of standards. The current lack of ASF vaccines means disease control focuses on stamping out. Media reports of inhumane practices during stamping out operations, often with disturbing footage, continue to cause concern and indicate an ongoing need for training in destruction, disposal and decontamination operations within disease control programmes. These topics have been included in the series of ASF webinars that the

OIE has produced for a targeted Asian audience. The importance of wild boar in the ASF sylvatic cycles of northern Europe and Eurasia, and the ecological aspects of population management and considerations during disease control operations, are also covered in a new European Union, OIE and FAO publication.

The critical challenges for animal welfare through transport, slaughter and during disease control operations have also been the focus of the recent OIE Animal Welfare Focal Point training sessions. The respective focus areas in the Regional Animal Welfare Strategies, as well as current scenarios and priorities in each region, provide an opportunity to focus these events to provide a relevant and engaging experience. As a manifestation of collaborative capability within the regions, the training sessions also allow space for useful discussions on improving the relevance, implementation and support available under regional strategies.

Under the OIE Global Strategy, we made a commitment to create a mechanism for dialogue on animal welfare issues. The OIE Animal Welfare Forum has been held twice at OIE Paris Headquarters, bringing together our Members, the private sector, and civil society representatives to discuss the challenges of supporting implementation of animal welfare standards (2018) and welfare during animal transportation (2019). Long distance transport of animals by sea, air or road creates particular challenges for animal welfare, as well as logistical and regulatory challenges. Supply chains that cross international borders highlight the importance of good planning and a partnership approach to successful completion of every consignment. This is driven by an underlying philosophy of all parties taking responsibility, with good training of personnel,



Matthew Stone, Deputy Director General, International Standards and Science, World Organisation for Animal Health (OIE)

and a good working relationship between private and public sector partners all the way along the chain. These forum meetings are proving an important opportunity to discuss and understand different perspectives on common challenges, with a focus on collaboration between public and private sectors, in partnership with academic and civil society groups, for better animal welfare outcomes.

1 <https://www.oie.int/en/animal-welfare/conferences/>

2 https://www.oie.int/fileadmin/Home/eng/Animal_Welfare/docs/pdf/Others/EN_OIE_AW_Strategy.pdf

3 <https://rr-asia.oie.int/disease-info/african-swine-fever/african-swine-fever-in-asia/asf-related-webinars/>

4 <http://www.fao.org/3/ca5987en/ca5987en.pdf>

MPI Animal Welfare Compliance Prosecution Results

July 2019 – September 2019

Wood

In July 2019, Kenneth Charles Wood of Wellsford, Northland was convicted and sentenced on two charges under the Animal Welfare Act. The charges related to failing to meet the nutritional needs of two cattle that were emaciated, and the ill-treatment of one heifer cow by omitting to remove wire from its neck. Mr Wood was fined \$5000 in relation to both charges and received a partial disqualification, limiting him to owning or having control over no more than 70 bovine animals for a period of two years commencing 11 September 2019.

Coxhead

In August 2019, Elaine Evelyn Coxhead of Waihi, Waikato was convicted and sentenced on three charges under the Animal Welfare Act. The charges related to the ill-treatment of six dairy cows that became emaciated, failing to provide proper and sufficient food to seven dairy cows, and failing to comply with a notice issued by an Animal Welfare Inspector and a court order. This was the second prosecution MPI has brought against this farmer. A fine of \$7000 was imposed plus \$660 court costs. The defendant was also ordered to pay \$4150.30 in veterinary expenses.

Pattullo and Knopp

In August 2019, Andrew John Pattullo and Barbara Ann Knopp of Kaitaia, Northland were jointly charged under the Animal Welfare Act in relation to keeping a pig alive when it was in such a condition that it was suffering unreasonable or unnecessary pain or distress, and another charge of failing to meet the needs of two Saint Bernard dogs. Pattullo was convicted and fined \$3800 and ordered to pay MPI costs of \$3900. Knopp was convicted and fined \$3000 and ordered to pay MPI costs of \$3000.

In a separate matter, Mr Pattullo was also charged with the ill-treatment of five cows by dehorning them without pain relief. He was convicted and fined \$4500 in relation to this incident.

Spencer

In August 2019, Malcolm Neil Spencer of Hawarden, Canterbury was charged under the Animal Welfare Act for leaving an injured steer without veterinary advice or treatment for a period of five to seven months. The steer was injured to such an extent that it had a complete loss of use of its left hind leg. Mr Spencer was convicted and discharged. He was ordered to pay veterinary costs of \$385.80.

Nettleingham

In August 2019, John Nettleingham of Tauranga, Bay of Plenty was charged with four charges under the Animal Welfare Act. The charges related to failing to provide proper and sufficient feed for 40 dry dairy cows, 51 dairy heifers and 57 dairy cows, as well as keeping a single dairy cow alive when she was in pain and distress. Mr Nettleingham was convicted and fined \$6000 and ordered to pay \$2,279.50 in veterinary costs. A partial disqualification order was also put in place for two years, disqualifying him from being the owner or person in charge of any more than 97 bovine animals over the age of 6 months and 20 replacement calves at any one time (to take effect 27 September 2019).

Stanton

In August 2019, David James Keith Stanton of Geraldine was convicted and discharged on one charge under the Animal Welfare Act in relation to failing to provide treatment or euthanasia to a bull that was suffering severe joint disease. Mr Stanton was ordered to pay \$12,000 reparation as a contribution towards MPI's prosecution costs (expert veterinarian witness fees).

Carter

In September 2019, Colin Ernest Carter of Ruawai, Northland was convicted and sentenced on three charges under the Animal Welfare Act. The charges related to failing to provide sufficient feed to 25 cows, failing to treat 13 cows suffering from lameness and failing to provide sufficient water to 72 calves. A fine of \$4000 was imposed and Mr Carter was ordered to pay MPI's veterinarian expenses of \$8639.

Hendy

In September 2019, Michael John Hendy of Kaitaia, Northland was convicted and sentenced on two charges under the Animal Welfare Act relating to two cattle that were suffering from severe cancer eye. A \$3000 fine was imposed.

Salt

In July 2019, Murray Charles Salt of Te Puke, Bay of Plenty was discharged without conviction on one charge under the Animal Welfare Act. The charge related to the confinement and transportation of an aggressive horned bull without making any provisions to prevent injury to other animals. Mr Salt was ordered to pay \$3000 towards the costs of the prosecution and \$130 court costs.

Codes of ethical conduct

– approvals, notifications and terminations since Welfare Pulse issue 29

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

- Department of Conservation
- Eastern Institute of Technology
- National Institute of Water and Atmospheric Research Ltd
- Nelson Marlborough Institute of Technology
- New Zealand Association of Science Educators
- University of Waikato

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

- AsureQuality Ltd (to use AgResearch Ltd's code)
- BCF Ultrasound (to use University of Waikato's code) (renewal, code expired)
- Boffa Miskell Ltd (to use University of Waikato's code) (renewal, code expired)
- Cawthron Institute (to use Nelson Marlborough Institute of Technology's code) (renewal, code expired)
- Dermcare Vet (to use Invetus NZ Ltd's code)
- Engender Technologies Ltd (to use AgResearch Ltd's code)
- Eurofins Animal Health NZ (to use University of Waikato's code) (renewal, code expired)
- Gallagher Group Ltd (to use AgResearch Ltd's code)
- Hayward, Ursula (to use University of Waikato's code) (renewal, code expired)
- Matthews, Lindsay (to use University of Waikato's code) (renewal, code expired)
- McLeod, Graeme & Janelle (to use University of Waikato's code) (renewal, code expired)

- New Zealand Institute for Plant and Food Research Ltd (to use Nelson Marlborough Institute of Technology's code) (renewal, code expired)
- Skretting (to use Nelson Marlborough Institute of Technology's code) (renewal, code expired)
- The New Zealand King Salmon Co. Ltd (to use Nelson Marlborough Institute of Technology's code) (renewal, code expired)
- Waikato Regional Council (to use University of Waikato'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

- Massey University
- Toi Ohomai Institute of Technology

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

- Aroa Biosurgery Ltd
- Innovative Medical Solutions Ltd
- Pharmfirst Ltd
- PJM Scientific Pty Ltd
- SBScibus Ltd
- Totally Vets Ltd
- Waikato Regional Council

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Codes of Welfare

– update on consultation, development and review since issue 29

Codes of welfare are issued by the Minister for Primary Industries 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 Minister

- Dairy Housing Amendment

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

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MPI On The Road

For the third successive season, the *Follow the Trucks* Programme saw MPI staff members out on the road working with transporters and visiting farms in the interests of calf welfare. This season, 539 farms were visited across the country by 11 VS staff (Verification Services premises-based vets) accompanied by Compliance Animal Welfare Inspectors or National Animal Identification and Tracing (NAIT) officers. Twenty-five trucking companies were involved covering 41 different bobby calf runs.



The positive outcomes of such a programme are threefold. Firstly, it enables the monitoring of calf welfare and compliance with the calf regulations which have been in place for the past three years. Secondly, it provides the ideal opportunity for MPI to use an educational approach with parties in the supply chain who are not routinely encountered i.e. transporters and farmers.

Thirdly, and just as importantly, it provides an invaluable opportunity for MPI to build important relationships with those parties.

Calf Welfare and Regulation Compliance

Direct viewing of calves on farm as well as shelter and loading facilities were the main objectives of the exercise. Compliance with Regulation 8 – Prohibition of blunt force trauma, Regulation 10 – Shelter requirements, Regulation 33 – Fitness for transport and Regulation 35 – Loading Facilities were assessed. Other subjects such as provision of water for bobby calves, break feeding and mud, NAIT requirements and the recent introduction of the disbudding regulations, were discussed as information gathering questions if the farmer was present and as time allowed. Keeping up with the bobby calf truck meant that often only 5 – 10 minutes was spent on farm (unless an issue was identified).

The vast majority of farms visited generally complied with requirements. Issues found were mainly with the shelter and loading facilities, with some evidence of inadequate shelter or slippery ramps brought to light by the adverse weather conditions. Other observations included height issues with the truck and loading ramp, and disrepair of the facility (57 issues in total). There were 26 incidents involving one or more fitness for transport issues, including calves that had become wet, had wet navels, were too young or physically impaired or ill. Most were dealt with by education and discussion with the farmer, or by leaving a note on the S129 (a Compliance Notice of Entry which MPI staff are legally obliged to leave on farm if no one is present at the time of the visit). A total of 201 S129s were issued. Only 10 cases warranted referral to Compliance for more formal investigation. These included three cases of

apparent blunt force trauma, one with no loading facility, four for inadequate loading facilities and/or shelter and two for leaving sick calves in the bobby pen.

Education

MPI follows the VADE (Voluntary, Assisted, Directed and Enforced) model in its approach to issues encountered. The opportunity to provide education and encourage voluntary compliance with welfare requirements and legislation is extremely important. Transporters were generally very knowledgeable but found that being accompanied by MPI was a valuable learning experience. They took the opportunity to ask questions and generally gain more understanding. It also provided support and calibration to truckies when they left unsuitable calves behind, for which they often bear the brunt of farmers' frustrations.

Similarly, farmers appreciated the opportunity to ask questions. The programme provides the opportunity for discussions before serious issues arise. Where their facilities were not up to standard, they were grateful for any input on how to improve them, and keen to learn what others might be doing on farm. In the majority of



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cases, farmers addressed any shortcomings extremely quickly with transporters reporting that the issues had been fixed by the next pick up. If farmers were not present, a contact number left on the S129 gave them the opportunity to ring and ask questions. Alternatively, farmers were telephoned so an educational discussion could be held – viewed as much more valuable than leaving a note.

Relationship building

The importance and value of this consequence of the *Follow the Trucks* programme cannot be underestimated. Generally MPI staff were well received, with most farmers engaging willingly once they realised the friendly and polite approach being used. Farmers care about their stock and if something is amiss it is often through lack of awareness. They appreciated the constructive feedback provided and the opportunity to address issues themselves. The different methods used to comply with requirements were sometimes quite ingenious with the design of shelters and ramps. One supplier had designed and built a hoist which consisted of a large pen inside a shed. Staff could walk calves in at one end so they didn't injure themselves or the calves lifting them and the whole pen was raised by a hoist when the truck arrived and calves walked out the other end onto the truck. The farmer had built a number of these hoists for others in the area. A number of farmers took the opportunity to show off their good farming practices and systems. They were keen to show their knowledge of the requirements. Some openly expressed support for the programme and were pleased to see that follow up of the regulations was occurring. For a lot of farmers this may have been their first encounter with MPI, so it was extremely important to have an open, friendly and practical approach to make the most of first impressions. Negative feedback received from farmers was mainly in relation to MPI being present on farm in their absence leading to biosecurity worries. Also, the S129 left behind is quite an official and daunting looking

notice and there were worries and concerns over what it meant and why it had been left. This feedback has very much been taken on board with a plan to develop an information leaflet for the 2020 season. This will outline the purpose of the programme and what's involved. It will detail areas on farm where MPI do and do not enter and what we are looking at. It will also explain why there is a need to leave an S129 and what it means if you receive one.

The relationships built with the transporters is also crucial. Most trucking companies have received MPI extremely positively and been grateful for the opportunity to have us along. When drivers are accompanied for the first time they noticeably start to relax after the first few pickups as their trust is gained. As the run continues, they interact more and confide any concerns they may have about particular farms or suppliers. Their insight and feedback is invaluable. They are often on these farms at least every other day during the peak of the season and they have detailed knowledge on suppliers and farm set ups. They have been extremely proactive in leaving calves behind that are not fit to transport and consequently have helped in the education of farmers. Some have acquired new crates built especially for bobby calves which have higher decks (900mm as opposed to 700mm) and motorised plastic covers to protect calves from adverse weather.

As an organisation, we recognise these efforts and wholeheartedly applaud them. The only concern raised by some transport companies was that their clients would hold them responsible for taking MPI onto their farms which may result in loss of clients. We are not aware of any reports where this has actually happened, but the leaflet for 2020 will clarify that this is an MPI initiative, not transporter led, and hopefully that will allay their fears.

Finally, the programme sees the coming together of MPI colleagues from different departments (namely VS and Compliance). This leads to a deeper understanding of each



other's roles and builds upon relationships already established as well as supporting the closeness with which we work together on the animal welfare front.

Conclusion

The *Follow the Trucks* programme provides a valuable insight into the happenings on the farm during a very busy time of year for farmers. The visits assist in standardisation and improvement of calf facilities and overall presentation, and helps ensure requirements are taken seriously. Although the number of farms visited each year is a relatively small sample of dairy farms, there is a considerable grapevine effect with other farmers realising they could be visited at any time.

Michelle Clatworthy

Photos: Michelle Clatworthy

Dealing with Animal and Human Abuse

Abuse of animals is not a new phenomenon, and whilst it is always difficult to comprehend why someone would deliberately hurt an animal (or a human), the difference today is that we are much better placed to deal with such cases and sanction appropriately. We have good diagnostic indicators for abuse, and there is growing awareness of the link between violence to animals and violence to people – and the implications for both.



Photo: RSPCA

When referring to the term “abuse” one might automatically think of physical abuse, or so-called non-accidental injury. However, there are other forms of abuse. The recognised categories of abuse are physical; sexual; emotional; and neglect.

It should be no surprise that there are similarities between the abuse of humans and the abuse of animals with regards the circumstances of the violence, the actions involved, and the excuses offered. This is due to one common denominator: the human perpetrator. However, these similarities may be difficult for some to understand.

When dealing with cases of suspected companion animal non-accidental injury, consideration should also be given to the “Link”, the interrelationship between violence to people and violence to animals. It has been suggested that evidence of abuse to the family pet might be a useful indicator for early signs of abuse to other members of the family. It must be borne in mind that whilst animal abuse may be an indicator of other abuse in the family, it is not a given.

It must also be stressed that identifying non-accidental injury is a difficult challenge, both emotionally (we do not expect animals to be intentionally hurt) and intellectually (it is a combination of factors that raises suspicion and that combination is variable). Furthermore, it may only be after a period of time that suspicions are aroused. However, we now have good diagnostic indicators for non-accidental injury in children and companion animals:

- history inconsistent with the injury;
- discrepant history;
- repetitive injuries;
- behaviour of the animal (child) and/or the owner (parent) in conjunction with one or more of the above.

In order to maximise investigations of such cases, it is important to recognise that veterinary forensic pathology is a specialism for animals. For the inexperienced to undertake a post-mortem examination will be to destroy the all-important forensic evidence and compromise the success of prosecution.

Reporting cases of suspected animal abuse may not be a mandatory requirement of veterinary/animal welfare professionals. However, one could argue that there is a moral and ethical responsibility to do so, and that organisations

involved in such cases should have a protocol for dealing with them, including the provision of support for members of staff involved. [Editor’s note: see www.vetcouncil.org.nz for New Zealand guidance on this point.]

Members of staff should be aware of the possibility that animal abuse may be an indicator of other abuse within a family. However, the complexities and challenges of such should not be underestimated. We are not expected to cross our professional boundaries if other abuse, beyond that involving our animal patients is involved. Nevertheless, we ought to be prepared and be able to show compassion if we suspect a client is also a victim of abuse, and to signpost them to organisations where they might receive help and guidance.

**“When animals are abused, people are at risk;
when people are abused, animals are at risk.”**

American Humane Association

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Thoroughbred Welfare

Photo: Race images



An article in the October 2019 *Welfare Pulse* anticipated the release of *Thoroughbred Welfare Guidelines* that are created around the Five Domains model of animal welfare. The aim of the guidelines are that Thoroughbred horses enjoy a life worth living through positive experiences and a reduction in avoidable negative experiences.

In late October, these guidelines were released and can be viewed via the following weblink:

<https://loveracing.nz/News/28898/ThoroughbredWelfareguidelinesreleased.aspx>.

As part of our welfare strategy NZTR have also made amendments to the Rules of Racing to allow for better traceability of our horses from birth to death. There will be various duties of care on each racehorse's owner, or "accountable person", including that they sell or rehome their horse to someone who is both appropriately skilled and with an appropriate property for horses. There will also be a requirement for information relating to foaling, changes of ownership, location, and death or retirement to be promptly submitted.

In November, Martin Burns (NZTR – GM Racing & Equine Welfare) was provided an opportunity to present to NAWAC and outline progress of various Thoroughbred welfare initiatives over the past two years, and the priorities that lie ahead. Prominent among these are: attaining comprehensive traceability of Thoroughbreds from foals to death or deregistration from racing and breeding; and focus and support for the retraining and rehoming of ex-racehorses. NZTR values such opportunities in maintaining a cohesive approach with NAWAC and MPI on welfare matters.

For more information about NZTR's welfare policies, please contact Martin Burns: martin.burns@nztr.co.nz

New Zealand Thoroughbred Racing Inc (NZTR) is the governing body of the thoroughbred racing code in New Zealand.

www.loveracing.nz

AAALAC awarding the Three Rs

In the last issue, we focused on the Aotearoa Three Rs award. AAALAC (the Association for Assessment and Accreditation of Laboratory Animal Care) International's Global 3Rs Awards Program is established to fund specific projects that advance any of the Three Rs, and is also open to scientists from New Zealand.

The Programme is for "significant innovative contributions toward the 3Rs of animal research to advance ethical science" and is open to researchers in academia or industry in any area of biology. The Pacific Rim regional award covers New Zealand.

Nominations must be based on a primary research paper that advances the 3Rs.

See <https://www.aaalac.org/news/Global-3Rs-Awards.cfm> for more information.

Research roadmap to find more humane alternatives to stunning with carbon dioxide

Atmospheres containing elevated levels of carbon dioxide (CO₂) are aversive to animals. The Swiss government has declared that no method of administering CO₂ is humane for stunning or killing any animal in any context. As a result of their 2019 international “Alternatives to CO₂” 3Rs symposium, a Research Roadmap has been published to guide researchers to find alternative methods with better animal welfare outcomes.

Switzerland ranked first equal with New Zealand in the 2015 World Animal Protection Index and is now showing leadership when it comes to stunning and killing animals used for food production and laboratory research. In 2018, the Swiss Federal Food Safety and Veterinary Office (FSVO) made a decision – they would only fund research and activities aiming to replace, not refine, the use of CO₂ as a method of stunning and killing animals. That may not sound exciting, but it clearly signals the Swiss government’s rejection of CO₂ as a humane method of stunning and, more importantly, their belief that administration of CO₂ cannot be modified to make it acceptable.

Many millions of animals every year are stunned and/or killed by exposing them to atmospheres containing elevated concentrations of CO₂ (hypercapnic atmospheres). There are practical, safety, economic, research and even some animal welfare benefits to CO₂ stunning/killing, including that animals can be stunned in groups, with minimal handling or restraint and sometimes even in their home environment. However, based on robust scientific evidence, it is now generally accepted that exposure to hypercapnic atmospheres is strongly aversive to mammals, at least. This is true for both the very high CO₂ concentrations (80-90 percent) used to commercially stun pigs in some countries and for the “gradual fill” methods often recommended for killing laboratory rodents and poultry, i.e. CO₂ is gradually increased to 40-50 percent at which animals lose consciousness (<https://www.mdpi.com/2076-2615/9/8/482/htm>).

Three specific negative experiences are believed to underpin the aversion mammals show to hypercapnic atmospheres. Anxiety/fear and air hunger may occur at concentrations

as low as 7 percent, much lower than is needed to induce unconsciousness. These intensify as CO₂ percent rises, and pain occurs in the eyes and respiratory tract when CO₂ reaches about 40 percent. As anxiety and air hunger are inherent to CO₂ exposure, they cannot be avoided by modifying the rate of administration. Thus, while the American Veterinary Medical Association recommends that CO₂ is ‘acceptable with conditions’ as a method of euthanasia (killing with minimal pain or distress), closer inspection of those conditions suggests that they cannot be met for mammals, i.e. acceptable only for those species where aversion or distress can be minimised.

With this understanding, there is a clear need for welfare-friendly alternatives to CO₂ stunning that are still practical, safe (physically and psychologically) and cost-effective for use in food production and laboratory settings. To expedite identification of such alternatives, the FSVO has hosted two international “Alternatives to CO₂” symposiums. The 2019 symposium resulted in publication of a detailed ‘Research Roadmap’ to guide research to find and implement alternative stunning methods to improve animal welfare (<https://www.mdpi.com/2076-2615/9/11/911/pdf>). The roadmap identifies the need for consistent terminology and standardised behavioural tests for assessing welfare impacts of stunning methods, as well as better ways to determine animals’ state of consciousness during stunning and thus the duration of any unpleasant experiences. We encourage researchers to make use of the Roadmap to accelerate progress in finding alternatives and to reduce wastage of animals in research unlikely to achieve these goals.



Photo: Understanding Animal Research

Note: CO₂ is not used for commercial stunning of pigs or poultry in New Zealand. However, it is used widely for stunning/killing laboratory rodents and may be used for on-farm depopulation of poultry.

Ngaio Beausoleil

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TeamMate: A study of New Zealand's hardest agricultural worker

Farm dogs are important workers on many New Zealand sheep and beef farms. Despite their importance to New Zealand's agriculture, there have been relatively few studies of farm dogs, and none that include a period of follow-up. To fill this void, Vetlife and Massey University's Working Dog Centre launched TeamMate, a four-year longitudinal study, to better understand how farm dogs are managed, the health problems they experience and factors that impact on career longevity. Study participants were drawn from existing Vetlife clients and recruitment started in early 2014.

Photo: Helen Williamson



During a physical examination on a heading dog in Central Otago – from left Dr Caeley Thacker, Dr Megan Baynham and Dr Lori Linney.

When an owner was enrolled in the study, a veterinarian and a technician visited the property to collect information about the owner, the property and working dogs that were over 18 months of age. During this visit the veterinarians conducted a full physical examination of all dogs that were aged more than 18 months. Following enrolment the owner was re-visited at roughly six-monthly intervals by a veterinarian to collect additional data and conduct a physical examination of the dogs enrolled in the study. Over the study period 126 dog owners, on 116 farms located in the South Island, have been enrolled in the study and full physical examinations have been conducted on 641 working dogs.

On average each owner had four dogs, but this did range from one to nine. Eighty percent of the owners fed their dogs a combination of commercial biscuits and meat killed and butchered on farm. The median age of the dogs at enrolment was 4 years; there were slightly more male dogs in the study (54 percent). Neutering was low with only three percent of male dogs and ten percent of female dogs neutered. Only one in five dogs were vaccinated regularly. Approximately half the dogs enrolled in TeamMate are Huntaways and the other half heading dogs. The Huntaways were heavier than heading dogs, with an average body weight of 30 kg while heading dogs weighed an average of 21 kg. However, the median body condition score (BCS) did not vary between the heading dogs and Huntaways, with both dogs having an average BCS of 4 on a nine-point scale that considered scores of 4 or 5 out of nine as ideal.

Roughly 40 percent of dogs had a problem involving the musculoskeletal system. The abnormalities that were recorded included any deviation from the ideal, including signs of previously healed injuries and normal wear that do not necessarily represent reduced health or welfare at the time of examination. Because the dogs have been followed over time we will now be able to explore the impact of health conditions and body condition on career longevity. Further, we will be able to identify risk factors for some of the more common conditions.

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Photo: Lucy McKnight

A Huntaway with owner Jamie Bochal being weighed in the Mackenzie Country.

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Risk factors for bobby calf mortality across the New Zealand dairy supply chain

In the 2016 spring calving season, a study was carried out to identify risk factors for bobby calf mortality during transport or in lairage at the processing plant. Information about the management of selected cases (calves that died or were condemned before the point of slaughter) and controls (healthy calves that were presented for slaughter) on-farm, during transport and at the processing plant were obtained from supplying farmers, transport operators and processing plant personnel. Statistical analyses identified three significant risk factors for calf mortality: (1) number of weeks into the farm of origin's calving season; (2) travel time from the farm to the processor; and (3) whether calves were processed at premises operating a same-day or next-day slaughter schedule.

Surplus dairy calves, referred to as bobby calves, are considered a by-product of the pastoral dairy industry. Each year in New Zealand, approximately 2.2 million bobby calves are sent to slaughter. Due to the very young age (typically between 4 and 10 days-of-age) at which they are separated from the dam, transported, mixed and held off feed prior to slaughter, bobby calves are at high risk of welfare compromise. In 2015, the bobby calf mortality rate (death or condemnation before the point of slaughter) was 0.25 percent, equating to some 5500 calves¹ and since then has decreased to 0.12 percent in 2016 and 0.06 percent (6 calves per 10,000) in 2017^{1,2}. In order to identify risk factors for bobby calf death before slaughter, a case-control study was carried out in the 2016 spring calving season. Veterinarians at 29 slaughter plants across New Zealand identified case and control calves for inclusion in the study. Calf management information was collected retrospectively for subsequent analysis. Information was obtained for a total of 38 cases and 156 control calves.

Statistical models were used to examine the relationship between various farm, transport and processing plant management variables.

For every additional week into the farm of origin's calving season the odds of a calf dying increased by a factor of 1.2, meaning a calf born in the second week of the season was 1.2 times more likely to die than a calf born in the first week and so on. Similarly, every additional hour of travel time increased the odds of calf mortality by a factor of 1.43. Finally, calves processed at premises operating a next-day slaughter schedule at the time of selection were almost four times more likely to die before slaughter than those processed at premises operating a same-day slaughter schedule. However, when the data set was limited to those calves that died or were condemned in the yards (i.e. excluding calves that were dead or condemned on arrival at the plant), the effect of slaughter schedule was not significant. This may be due to the relatively small sample size, but is worthy of further investigation.

Based on these results, it is recommended that transport times for bobby calves be as short as possible and that calves should be processed on the day that they arrive at the slaughter plant. This is in line with new calf regulations introduced by MPI in 2016/17 which stipulate that the total journey duration may not exceed 12 hours and that calves should be slaughtered as soon as possible after arriving at the processing plant and within 24 hours of their last feed. Although farm management factors, such as feeding, housing and cleaning did not apparently influence mortality risk, the effect of number of weeks into a farm's calving season on this risk suggests there may be farm-related factors that change over the season. This should be investigated further.



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¹ Anonymous, 2017. *Mortality rates in bobby calves 2008 to 2016*. Ministry for Primary Industries, Wellington, New Zealand.

² Anonymous, 2018. *Mortality rate in young calves in the 2017 spring calving season*. Ministry for Primary Industries, Wellington, New Zealand.

Animals in Exhibition, Entertainment and Encounter: assessing the costs and benefits of these activities to society

The National Animal Welfare Advisory Committee (NAWAC) has a mandate to provide ministerial advice on animal welfare in Aotearoa New Zealand. This advice is provided across a wide range of activities involving the interactions between humans and animals, including animals providing food & fibre, specified work tasks & services, recreational pastimes, and companionship.

The human/animal interactions that NAWAC advises on, include the wide-ranging activities of animals used for exhibition, entertainment, and encounter (which NAWAC has categorised as the 3Es). Each of these areas encompasses a wide spectrum of activities. For example:

Exhibition may be a permanent activity where animals are held in a facility that is open to the public such as a zoo, aviary, wildlife sanctuary, or farming tourism, but may also be a shorter term activity (also for public display) for instance A&P, poultry or dog shows.

Entertainment includes the horse and dog racing codes, the many equestrian activities, and rodeo.

Encounter activities may involve close-up experiences with native birds and marine cetaceans in the wild, or be part of an exhibition activity such as interacting with an animal being displayed at a zoo.

While NAWAC's primary focus is protecting animal welfare, it also acknowledges that there are wider implications of such advice in terms of societal mores.

Contemporary societies generally agree that it is acceptable to use animals for human purposes provided that such use is humane and justified¹. New Zealand's Animal Welfare Act 1999 is framed around this view. Animal-focused 3Es activities provide many cultural benefits including educational opportunities, leisure pursuits, competitive and sporting

challenges, and fiscal returns. However, most carry at least some welfare cost for the animals involved. For most people, therefore, it is the cost/benefit balance that determines if (and how) they will ascribe social licence to a specified 3Es activity.

NAWAC has adopted a variety of tools for analysing animal welfare impact (with respect to the animal's physical, health, and behavioural needs) in accordance with good practice and scientific knowledge. Applying these frameworks can provide an adequate assessment of the impact of an activity on animal welfare. However, NAWAC is lacking a tool that systematically considers the value that society derives from animal use activities, and to assess whether this benefit justifies any welfare compromise occurring as being necessary and reasonable.

NAWAC is currently amending its' Guideline 07: Taking account of society's ethical values, technical viewpoints and public opinion², to include a Societal Values Framework. This framework was recently developed to underpin a structured analysis of societal values (as distinct from animal welfare impact) associated with a 3Es activity.

Such analysis will better inform committee decisions by considering how any recommendations may impact stakeholders, and the fairness with which those decisions are distributed amongst stakeholders.

The use of a Societal Values Framework alongside an animal welfare assessment, will help provide a consistent approach to ethical decision-making around the acceptability of different uses of animals. The framework is expected to increase transparency of, and improve, NAWAC's decision making. NAWAC is will be seeking feedback on the framework in mid-2020.

¹ Banner, M, Bulfield, G, Clark, S, Gormally, L, Hignett, P, Kimbell, H, Milburn, C and Moffitt, J. 1995. *Report of the Committee to Consider the Ethical Implications of Emerging Technologies in the Breeding of Farm Animals*, London, UK: HMSO.

² <https://www.mpi.govt.nz/dmsdocument/8515-nawac-guideline-07-taking-account-of-societys-ethical-values-technical-viewpoints-and-public-opinion>

Openness in animal research

Openness was a prominent theme at the 2019 ANZLAA conference in Perth, and well represented at other international animal research related conferences over the past year. Openness for both individuals and organisations may seem daunting, but it doesn't have to be. Practical tips are included here, as well as anticipation that by the end of next year an Australia and New Zealand Openness Agreement will be a reality.

Attendance was high at the six presentations on openness at the 2019 Australian and New Zealand Laboratory Association (ANZLAA) conference. There was an update on progress towards an Australia and New Zealand Openness Agreement, as well as talks on personal initiatives to support openness, institutional openness and the importance of a biomedical advocacy association. An engaging panel discussion was the culmination of these sessions.

Support for openness aligns with the findings from a survey of ANZLAA members earlier in the year, which found that 87 percent of respondents indicated a belief that more openness in animal research was required. A similar proportion supported the development of an Australian and New Zealand Openness Agreement. Other conferences featuring multiple talks on openness and outreach include the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART), the American Association of Laboratory Animal Science (AALAS) and the Federation of European Laboratory Animal Science Associations (FELASA).

Here are a few tips to start on the road to openness as an individual and as an organisation:

Personal Openness

- Keep it brief: have a conversation, don't give a lecture.
- Communicate with supportive family and friends first.
- Use personal experiences, like a positive animal-related research story from your facility.
- It's ok to share feelings (we care, so show it).
- Go from general to specific when speaking about what you do: remember that different people have different levels of knowledge or interest.

- Avoid the use of acronyms (nothing like an acronym to put someone off!)
- Don't be afraid of tough questions; someone will ask about euthanasia.
 - “Good question. Some animals do need to be humanely euthanised as part of our work, because....”
- Learn from experiences and practise to increase confidence.
- If you're brave enough, test your communication skills on a child (I find the 8-12 range quite good); they will always ask the toughest questions!
- If things aren't going well and you need to end a conversation:
 - “This can be a tough subject, and it seems like we're both passionate about animal welfare.”

Institutional Openness

- Try to engage the “right” people (go top down and bottom up).
- Show examples of success and who else is on board in New Zealand, Australia and the [UK \[link here http://concordatopenness.org.uk/leaders-in-openness/leaders-in-openness-2019-2022\]](http://concordatopenness.org.uk/leaders-in-openness/leaders-in-openness-2019-2022)
- Ask what information is needed to get things going and provide it.
- “Inreach”: make sure staff and students (even veterinary, veterinary technician and veterinary nursing students) know generally what is being done and why; including those not involved in animal research.
- This work within an organisation could not be more important!



Photo: Understanding Animal Research³

- Website enhancement:
 - Information on commitment to the 3Rs and upholding New Zealand legislation.

- Why animals are necessary and what animals are studied
- Significant advancements tied to animal studies (Nobel Prizes)
- Q and A area
- List of breakthroughs/accomplishments at the institution
- Photos and videos with explanations
- Posting animal numbers, species and impact grading
- Be mindful of opportunities to highlight animal work
- Successful inreach or outreach “events” help people realise the value of openness (these “events” don’t have to be big)
 - Biomedical Research Awareness Day¹ (BRAD) activities.
 - High school science animal research talks.
 - Facility visits for the families of animal care staff.
 - Tours and talks for patient advocacy organisations, donors or funding bodies.

Openness doesn’t have to be hard or take a lot of time, but it does need to happen. “A little bit more” is a good motto. This should fit with the comfort level of individuals and institutions. The hope is that by this time next year, ANZLAA and ANZCCART will be announcing final plans for the development of an Australia and New Zealand Openness Agreement. If you would like more information about openness or your organisation is interested in finding out more about the potential Australia and New Zealand Openness Agreement, please contact ANZCCART² New Zealand and we will be happy to help.

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³ <http://www.understandinganimalresearch.org.uk>

¹ <https://www.bradglobal.org>

Appointments to the National Animal Ethics Advisory Committee

The Minister of Agriculture, Hon Damien O'Connor has appointed Dr Nita Harding, Dr Jacquie Harper and Dr Mike King to the National Animal Ethics Advisory Committee.



Dr Nita Harding

Nita replaces Craig Johnson and provides knowledge and experience of veterinary science. Nita is a Massey University veterinary graduate and was amongst the first cohort of veterinarians to achieve membership of the Animal Welfare Chapter of the Australia and New Zealand College of Veterinary Scientists. Nita has worked in clinical practice in New Zealand and the United Kingdom, as well as holding various roles within industry and government. In addition, she has been an AEC member for over 20 years, and was an accredited reviewer of animal ethics committees for 10 years.

Nita's current role is that of a Technical Policy Advisor in the areas of animal welfare and biosecurity for DairyNZ. This role includes working with government and other industry organisations on animal health and welfare issues within the primary sector, and input into the development of resources and training for farmers and farm advisors. Prior to her current role Nita has worked in disease control programmes, live animal exports and the meat

industry.

Jacquie replaces Dr Malcolm Tingle and provides knowledge and experience of medical science. Jacquie has a PhD in chemistry and physiology and her research background is in biomedical science with a focus on the immunology of inflammation. Jacquie has worked in a number of research organisations including the Malaghan Institute of Medical Research and Victoria University of Wellington. She is currently Chief Scientist at Overseer Ltd.



Dr Mike King

Mike is an additional appointment to bring the committee up to its full membership. He provides the committee with knowledge and experience of ethical standards and conduct in respect of animals. Mike is a Senior Lecturer at the University of Otago's Bioethics Centre, within the Dunedin School of Medicine. He has an academic background in animal science at Massey University, followed by ethics, philosophy and politics at the University of Otago. His research and teaching has a general focus on the ethics of the biosciences, and animal ethics. His recent research has included a bioethical and legal assessment of New Zealand's animal welfare provisions, with Marcelo Rodriguez Ferrere, and the development of ethical decision-making frameworks for use in relation to animals. He currently sits on two Human Ethics Committees, is a Royal Society member on the Australian and New Zealand Council for the Care of Animals in Research and Teaching, and is an associate editor of the Journal of Medical Ethics.

The Minister also reappointed Dr Arnja Dale, the SPCA's Chief Scientific Officer, and Rob Hazelwood, MSD Animal Health's Animal Services Manager, for a second term.

Appointments to the National Animal Welfare Advisory Committee

The Minister of Agriculture, Hon Damien O'Connor has appointed Sandra Faulkner, Peter Mason and Professor Craig Johnson to the National Animal Welfare Advisory Committee.

Sandra replaces Katie Milne and provides knowledge and experience of the commercial use of animals. Sandra is an East Coast farmer and is involved with Gisborne Riding for the Disabled.



Peter Mason

Peter replaces Iain Torrance. He is an independent animal welfare consultant and provides knowledge and experience of animal welfare advocacy. Previous roles include Chief Executive of the Wellington SPCA, National President of the New Zealand SPCA, Director of Asia Pacific External Relations and Operations for World Animal Protection, and International Vice President of World Animal Protection.

Craig replaces Graeme Doole and provides the committee with knowledge and experience

of veterinary science, animal welfare advocacy and ethical standards and conduct in respect of animals. Craig is Professor of Veterinary Neurophysiology at Massey University and specialises in the field of pain and anaesthesia.

The Minister also reappointed Dr Gwyn Verkerk, a retired veterinarian and scientist, as Chair of the committee for a second term. Nick Poutu, a Technical Adviser with the Department of Conservation, has also been reappointed for a second term.



Craig Johnson

Caring for dairy cattle? Know the new rules!

Anyone caring for dairy cattle will be interested in the new amendments to the Code of Welfare for Dairy Cattle which came into force on 31 October 2019.

The code was reissued with the amendments by the Minister of Agriculture on the recommendation of the National Animal Welfare Advisory Committee (NAWAC).

The amendments contain new minimum standards and recommendations for best practice for meeting the behavioural needs of all dairy cattle and the management of dairy cattle in off-paddock facilities, including feed-pads, stand-off pads, wintering pads and loose-housed and free-stall barns.

NAWAC Chair, Dr Gwyneth Verkerk, says “Meeting behavioural needs is essential for dairy cattle welfare. It is very important that dairy cattle can lie down and rest in all management systems, including on pasture, on crops and in off-paddock facilities. Dairy cattle like to lie down where it is comfortable and dry. They refuse to lie down on hard, wet or muddy ground and can become stressed as a result.”

Keeping cows off paddock, especially in the long term, can present risks to animal welfare and the new rules address this. Dairy cattle kept in off-paddock facilities beyond three days now have to be provided with a well-drained lying area with a compressible soft surface or bedding and shelter. NAWAC also wants dairy cattle that are housed beyond 150 consecutive days to have access to outdoors, but affected farmers should be given time to comply.

“The Minister has agreed to delayed provisions for outdoor access and his officials will be working with us to determine how to implement these” Dr Verkerk comments.

The aim of the amendment is to encourage all those responsible for the welfare of dairy cattle to adopt the highest standards of husbandry, care and handling. It is expected the amendment will be used as a guide for best practice for the use of off-paddock facilities.

The reissued code and the explanatory report that accompanies it are available online at mpi.govt.nz/welfarecodes

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