



Welfare Pulse

Animal welfare in New Zealand and around the world

DECEMBER 2013

ISSUE 16

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Living in the shade – coping with heat

The hot, dry and shadeless regions of southern Africa are home to the Cape ground squirrel. Raising their large flat and bushy tails tail for shade and turning their backs to the sun whenever the temperature exceeds 40°C, they can forage for up to 7 hours a day (only 3 hours without shade).

Livestock won't encounter environments as challenging as the Kalahari Desert but they are subject to heat stress, even in NZ, and they do have a range of ways of reducing heat load and maintaining their core body temperatures within the fairly narrow limits necessary for normal functioning. These include physiological responses like vasodilation to dissipate heat from the blood, reducing heat production, and physical responses like panting, sweating, reducing activity, and seeking shelter.

For instance, sheep seek shade and in its absence will sweat more, pant to lose heat, drink more, and eat less. In preparation for the autumn rut, male deer seek zones where air temperature is more aligned with body temperature in order to get rid of the large amounts of heat produced in laying down fat. Ensuring animals are physiologically and structurally suited in order to survive and do well in a particular habitat, i.e. choosing a species or breed that suits the farm, is one approach to good animal welfare.

The other is "fitting the farm to the animal" – providing the resources and conditions that enable the animal to adapt well. Shade may be provided by topographical features such as undulating paddocks and gullies, natural features such as stands of trees or scrub, hedges or shelter belts, or artificial structures such as buildings etc. Other ways to manage heat stress

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The Cape ground squirrel uses its tail to provide shade enabling it to forage for seeds and plants in this relatively harsh environment.



Sheep crowd together gaining relief from the sun in each other's shade, and that provided by fences.



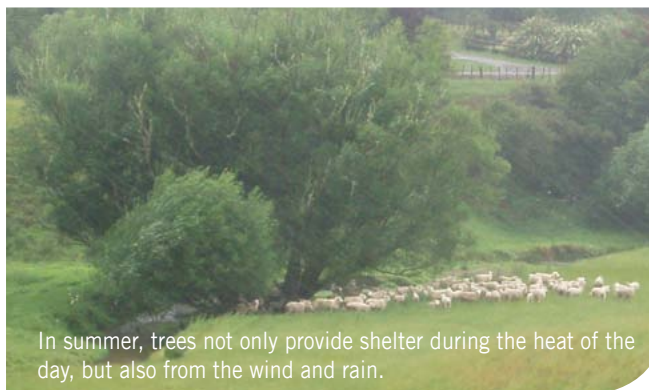


include grazing dairy cows close to the milking shed to reduce walking distance or reducing milking frequency. Animals may not always choose shade, even on hot days. Where shade is limited it is particularly important that water is plentiful as drinking mitigates heat stress.

Needs vary with species, age, location, body condition and health. For instance, growing lambs are amongst the first animals to seek shade during the summer. Heat stress and exhaustion should usually not occur if animals are able to find shade and rest during the hottest part of the day, especially if nights are cool.



Animals having access to shade is also important to people, evident in this roadside sign near Hunterville, New Zealand.



In summer, trees not only provide shelter during the heat of the day, but also from the wind and rain.

Excessive and prolonged heat requires the animal to divert energy to dissipate heat leading to compromised fitness. For instance, high temperature and humidity reduces milk production and fertility in dairy cows while artificial cooling increases pregnancy rates. Similarly, providing feedlot cattle with shade increases their growth rates.

Under our Safeguarding our Animals, Safeguarding our Reputation programme, New Zealand's Ministry for Primary Industries is working with various primary industry groups to improve animal welfare through alleviating the risks of inadequate shelter to livestock welfare and productivity.

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Cape ground squirrel: Hans Hillewaert (Wikimedia Commons).
 Other photos: Mark Fisher.

Animal manipulation statistics due

All organisations/individuals with a code of ethical conduct or who have an arrangement to use another organisation's animal ethics committee are reminded that their annual return of animals manipulated during 2013 is due to be submitted to the Ministry for Primary Industries by 28 February 2014. Returns must be in writing and should be made on the forms provided by MPI for this purpose.

A copy of the form is posted to organisations in December each year and is also available on the [MPI website](#). Please do not use old versions of the form.

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Wireless monitoring of physiology leads to reductions in and refinement of animal use

Drug discovery, safety testing and basic research worldwide necessitates the extensive use of animals in experimental procedures. In the past, this has meant that large numbers of animals have been used to make what is often only one measurement at a single point in time. In many cases, the results are obtained under anaesthetised conditions, making valid interpretation difficult as the results were often considered not to be reflective of the human condition.

Initial advances were made towards being able to make continuous measurements in conscious animals over longer periods using tether and swivel systems. These procedures used a technique where the tether passes through the skin. The disadvantage of these systems is that the insertion of the tether often resulted in low grade infections and, in addition, placed restrictions on the animal's normal range of movement. New techniques have focused on measuring cardiovascular activity, blood pressure and the activity of the nerves leading to the kidneys. Blood pressure, heart rate and nerve activity are all very reactive to the wellbeing of the animal, and so measurements of these have the potential to indicate levels of stress, but unfortunately, until now, there have been no suitable alternative recording systems commercially available.

Over the last 10 years, collaboration between University of Auckland Departments, the Circulatory Control Laboratory from the Department of Physiology and the Auckland Bioengineering Institute's Implantable Devices Group, has led to a substantial change in the way research groups around the world are able to monitor physiological signals. The work performed during the collaboration between these two organisations has led to the

development and validation of a series of wireless monitoring tools which allow remote and continuous monitoring of blood pressure and electrical signals from the nerves, heart or brain.

The new devices are still required to be implanted using surgical techniques, however, the total amount of surgery time is reduced and recovery time is shortened. Importantly, the lack of a tether passing through the skin means the infection risk is much reduced as is any restriction to the animal's normal behavior.

A unique aspect of this new technology is the ability to recharge the transmitters whilst implanted in the animal. Unlike competing technologies which require the transmitter battery to be replaced when flat, the wireless inductive power transfer on these new devices means this is no longer necessary. This long term monitoring enables animals to be used in studies as their own controls or used repeatedly for different drug doses. Again this lowers the number of animals required.

Use of these devices has succeeded in producing a substantial reduction in the number of animals used in experimental procedures worldwide and has now been commercialized through a University spin out company Telemetry Research (now Millar Instruments) and exported to over 30 countries. The new technology is now in use in most major pharmaceutical companies and is leading to significant reductions in the number of animals used in drug development and an improvement in animal welfare.

With the use of animals in research comes a responsibility to ensure that the best possible data is collected from each animal and as few animals as possible are used to obtain meaningful results. Use of wireless telemetry allows collection of the best



Wireless telemeter for measuring blood pressure

possible data but this still relies on animals being healthy and well recovered from surgery. The need for good animal care and the importance in allowing animals to fully recover from surgery before the start of any experimental intervention are strongly advocated in all research using animals.

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Telemeter for measuring blood pressure and ECG on the "SmartPad" that wirelessly receives the signals and recharges the battery

How can you tell your sheep is happy?

Have you ever wondered how you can tell how your sheep feels? Observing the emotions of sheep can be really difficult because they tend not to express their emotions. Sheep are prey animals, and giving away that they are scared, in pain or sick could make them an easy target for predators. The fact that sheep don't show many signs of emotions doesn't mean that they don't experience them however, although it can be very difficult for their owners to get an insight into their emotional state.

Humans generally express their emotions by body postures and facial expressions (among other means). For example, a smile generally means that someone is happy (positive state) while a frown may indicate that someone is angry (negative state). Other mammals also use facial expressions of emotions: monkeys and

rats can express both pleasure and disgust. Sheep, however, do not have a good superficial facial muscle network and this limits their ability to show facial expressions of emotions. Recently, researchers have started to investigate other potential ways of emotional expression in sheep and they have started to look at the position of the ears. Most sheep owners would have noticed that sheep generally move their ears a lot and point their ears towards an object/event when they are paying attention to it.

Researchers have placed sheep in different situations (negative and positive) and observed their ear postures. They identified the following main ear postures:

Forward ear posture

The forward ear posture (sometimes the ears are also raised) has been observed when sheep are exposed to an unfamiliar situation (for example, exposure to a novel object like a scarf). This posture has also been observed when sheep were separated from their flock members, which is very stressful for sheep. The forward ear posture could be a sign of increased attention when placed in a novel situation (or when looking at a strange camera), or it could be a sign of distress.



Forward ear posture – increased attention or distress

Neutral to backward ear posture

Sheep generally have their ears neutral (perpendicular to the head-rump axis) or backward when they are standing calm and quietly. The proportion of time spent with their ears in the backward position increases even further during positive situations such as feeding and being voluntarily groomed by their handler. The neutral-backward posture therefore seems to be an indication of a calm state, and perhaps even of positive emotions.



Backward ear posture – calm and quiet

Asymmetrical ear posture

The asymmetrical posture (one ear pointing back and the other ear pointing forward) has often been observed when sheep are distressed in situations such as separation from group members. The asymmetrical posture may also be an indication of frustration; sheep showed this posture more frequently when they were given a smaller food reward than expected.



Asymmetrical ear posture – frustration or distress

Number of ear posture changes

Sheep will change ear postures very frequently when they are stressed. Correspondingly the ear postures change less often when in a more positive state such as feeding or ruminating. Sheep that constantly change their ear postures may therefore be in a negative state.

Ear postures are context dependant. For example, the backward posture has been observed in both negative and positive situations, although there may be subtle differences not yet understood. Some of my colleagues have observed the backward ear posture when (merino) sheep are in pain and this posture is often combined with a hunched back and behavioural apathy. So please bear the context in mind before you interpret the backward ear posture of a sheep in pain as a sign of positive emotions!

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The important role of non-institutional members of animal ethics committees

The integrity of a regulatory system depends upon the degree of transparency provided by societal representation within its structure. In New Zealand, the legislation covering the use of animals in research, testing and teaching, traditionally an area of community concern, provides for such transparency by requiring outside representation on the ethics committees that oversee animal use.

Under the Animal Welfare Act 1999, an institution's animal ethics committee must include a minimum of three members who are not employed or have any association with the organisation in question. These three are a veterinarian nominated by the New Zealand Veterinary Association, an animal welfare representative nominated by the Royal New Zealand Society for the Prevention of Cruelty to Animals and a lay person nominated by a territorial authority or regional council.

The three have different roles but, as external to the institution, they are seen as representing society at large and so ensure public scrutiny. The veterinarian is often the only external member with scientific training on the committee – important in enabling assessment of study design and the implications of a research plan. Veterinarians also have a professional obligation as well as the skill to protect animal welfare and alleviate animal suffering – this is clearly the focus for the animal welfare representative as well.

The lay members on an animal ethics committee are generally regarded as those external members who have little or no background knowledge about the use of animals in research, testing and teaching. As such, they represent New Zealand society at large. Their relative naivety is valuable in that it allows questions to be asked about accepted procedures that others may take for granted, providing an opportunity for a fresh look and a new perspective.



Image courtesy of understandanimalresearch.org.uk

While lay members might initially feel daunted when exposed to areas in which they have no experience, it is part of the animal ethics committee process that projects must include a lay summary that allows non-scientific people to make an informed decision on whether the cost to the animals is outweighed by the benefits of the research. All animal ethics committee members, whether external or from the institution, need to know what will happen to the animals and how their welfare will be impacted. They need to know what steps will be taken to minimise that impact. They need to know the justification including the proposed benefits. They need to know that the numbers of animals can be justified and that there are no alternative methods available to find the information sought. They need to know that the people involved in the research are suitably qualified.

For non-institutional members, it's not always an easy role, but, in providing independent oversight and a different perspective, an important one and absolutely critical to the integrity of the animal ethics committee decision-making process.

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Visits of Value – Welfare of Man and Beast

Joe Nash, an Animal Health and Welfare Inspector in the United Kingdom, was awarded a Nuffield Farming Scholarship in 2012 to study the value of farm animal welfare inspections. Here she reflects on her visits in Europe and New Zealand.

Some of the best years of my life were spent growing up on the family dairy farm. Certainly it is where my passion for animal welfare commenced, which later developed into a strong desire to improve the quality of life for livestock, and, a commitment to impart knowledge and empathy on those responsible for their care.

Working for the Worcestershire Regulatory Services for the past nine years I have inspected farms, markets and abattoirs both in response to complaints, and undertaking farm assurance visits. I firmly believe farm inspections are vital for the integrity of the human food chain, disease control, the farmer, livestock and the consumer, but only if conducted in a competent and consistent manner by experienced, knowledgeable and empathetic inspectors. Inspectors should not just tick boxes or accept minimum standards. They should also be able to offer practical advice that will inspire, motivate and add value to the visit.

Farmers are receiving ever increasing inspections from various agencies and schemes and I felt concerned over their necessity and worth and decided to visit a range of countries to gain different perspectives and insights.

In Poland and Estonia, as anticipated, I found little evidence of any farm inspections other than occasional disease-control veterinary checks, conducted on a random or complaint basis. The methods of intensive livestock farming were distressing, especially in dairy cows, some tethered 24/7. Welfare, it seemed, was not



Joe with working dogs on a NZ sheep farm

of a high priority. There appeared little joy in farming in these countries – both for the farmer and the animals.

Welfare standards in Spain and Turkey were lacking and it would seem, not enforced. The average age of a farmer is 55 and youngsters are not interested in pursuing a career in agriculture. Visiting these countries sadly confirmed my views on culture and reluctance to change. Traditions are important, but at what cost to a sentient being?

And New Zealand, always a dream, and finally a reality, to visit such an amazing and inspiring country. I had the honour of spending the majority of my time with the dedicated Animal Welfare Standards team from the Ministry for Primary Industries and was hugely impressed with the work they are doing on the new codes of welfare. United Kingdom codes are badly out of date and of no use as a self regulation guide for farmers. I would very much like to see them updated and improved; perhaps even

Nuffield scholarships

In the aftermath of the Second World War Lord Nuffield, industrialist and philanthropist, initiated a travelling scholarship scheme for British and Empire farmers. The reason was twofold – to recognise their contribution to feeding the nation through the war, and as a method of advancing best practice in agriculture around the world.

Nuffield International is the body which encompasses all Nuffield Farming Scholarship organisations around the world: Australia, Canada, France, Ireland, New Zealand, United Kingdom, and Zimbabwe. Each year, the seven countries now participating in the scheme award 50 to 60 scholarships to young agriculturalists.

containing local information farmers could download, to make them a more valuable publication and not another booklet farmers put under a wonky table leg!

The highlights of my trip to New Zealand were:

Visiting a pig farm run by a prison and meeting the conscientious and passionate manager, who had previously run intensive pig units but had become depressed and disillusioned with the industry. He now proudly runs the “free-farm”. The pigs appeared content, as did the prisoners, who under the managers’ expert tutelage have learnt respect for sentient beings as well as stockman’s skills, which have helped in their search for employment on being released.

Assisting and observing a poor animal welfare case which mirrored the ones I sadly also have to deal with occasionally. It was a frustrating and upsetting day involving many emaciated in-calf dairy cattle. However, I was impressed throughout by the

continued...

professionalism of animal welfare inspectors and their expertise in handling the unfolding case, the cattle and the distressed farmer who fluctuated between denial, anger, and, ultimately realisation and guilt. The whole operation went smoothly and efficiently, causing the least possible stress to the cattle and the owner.

The overall standards of animal welfare in New Zealand were impressively high. Industry and regulators appeared positive and dedicated to improving standards, as did the farmers themselves.

Proactive, as well as reactive, inspections on farm are important in order to assist farmers to understand the legislation with which they must comply and to provide consumers with continuing confidence in British produce. An increase in communication between farm inspectors from different agencies would also be beneficial in order to collate the collected information and to avoid unnecessary repeat visits to farms.

Countries such as New Zealand and Turkey displayed confidence, positivity and pride in the farming practices that they use and I believe that this attitude, if displayed by the British, is likely to lead to an increase in trust in British farming. I consider that if we are open minded, non-judgmental and work together, inspector and farmer visits will be of value, and farmer and livestock welfare will be enhanced.

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Joe at work in the UK

Codes of ethical conduct – approvals, notifications and terminations since *issue 15*

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:

- Nil

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

- Chapel Street Veterinary Centre Ltd (to use AgResearch Ltd's code)
- FarmSense (NZ) Ltd (to use AgResearch Ltd's code)
- Jackson, Bethany (to use Auckland Zoological Park's code)
- Knowles, Garry & Rolhoff, Brent (to use Landcare Research NZ Ltd's code)
- Neill, Fleur (to use Landcare Research NZ Ltd's code)
- Otago Polytechnic (to use University of Otago's code)
- Ottomann, Garry (to use Landcare Research NZ Ltd's code)

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

- Anderson, Peter
- Silver Fern Farms Ltd

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Animal welfare policy

Holly Foran, from New Zealand's Ministry for Primary Industries Biosecurity, Food and Animal Welfare Policy Team, tells us about her role as a Policy Analyst in animal welfare.

About my job

I've been working as a Policy Analyst at the Ministry for Primary Industries for the last four years. Most of my time has been spent on animal welfare, but I also work across the Ministry when needed – including on biosecurity, food safety and other things going on in the primary sector.

Animal welfare at the Ministry is never boring. Our Animal Welfare Act covers the full range of ways that humans interact with animals in New Zealand – from pets, to farm animals, to animals used in research, and even wild animals.

My job as a policy analyst is to investigate issues, present and analyse options for dealing with them, and to give advice to decision-makers – including the Minister and Cabinet.

At the moment, the biggest piece of work we have on is the review of the Animal Welfare Act. In late 2010, the Minister asked us to review the Act and develop an animal welfare strategy for New Zealand. During 2011 we reviewed the Act, and talked to people who have an interest in animals about what does and doesn't work in the Act. In 2012, we developed some proposals and put these out for public consultation. As part of the public consultation process, we also held a number of small workshops with key people and groups across the country. Taking into account all the feedback that we'd received, we amended and finalised our proposals, then took them to Cabinet for approval to introduce an Animal Welfare Amendment Bill.

I was involved in all the stages of this piece of work – from talking to stakeholders to writing content for MPI's website about the review, to preparing advice for our Minister.

Apart from the Bill, I regularly do other work on animal welfare issues. I provide advice to the Minister on animal welfare matters as they arise – including providing him with advice when he replies to letters from the public. I also provide advice to the Minister on codes of welfare. Codes of welfare set detailed standards for how people can meet the needs of their animals, and are drafted by the National Animal Welfare Advisory Committee. My team's job is to provide the Minister with independent advice on codes of welfare as he decides whether to issue them. One of the recent codes we've worked on is the new layer hens code of welfare, which makes a substantial change to the way chickens are farmed in New Zealand by requiring that battery cages be phased out.

I also provide animal welfare advice to other people and groups within the Ministry for Primary Industries and the government.

I really enjoy working in animal welfare policy because it really matters – people are very passionate about doing the right thing by the animals that we care for and interact with.

What's happening with the Animal Welfare Amendment Bill?

In August, Parliament referred the Animal Welfare Amendment Bill to the Primary Production Select Committee.

The Select Committee called for public submissions, closing on 4 October 2013 – over 1,700 submissions were received. The



Select Committee also heard oral submissions during October and early November. The Select Committee is now considering the submissions it received, and is due to report back to Parliament in March.

More information can be found on the Ministry for Primary Industries' website, at <http://www.biosecurity.govt.nz/biosec/consult/proposals-for-aw-strategy-and-aw-act>

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Using Animals for Entertainment and Recreation: should they be cared for according to higher standards of welfare?

For many thousands of years humans have used animals as sources of food, labour, clothing, companionship, competition and entertainment. We still interact with animals or use their products on a daily basis but urbanisation has substantially disrupted the traditional associations and increasingly we have turned to more artificial interactions to address an apparent need to interact with both domesticated and wild animal species. One way in which we interact with animals in modern society is in the use of animals in entertainment. In recent times, public attitudes about the way in which we use animals are changing, and more questions are being asked about what is acceptable use of animals for entertainment, and what is not.

Some forms of animal use for entertainment have already been recognised as unacceptable in many countries around the world. Badger-baiting, bull-fighting and dog-fighting undoubtedly subject the animals involved to pain and distress and are prohibited in many countries. However, other sporting activities using animals such as horse and dog racing, rodeo, equestrian events and dog and cat shows are being increasingly examined by society. Potential impacts include, among others, animals being asked to perform beyond their capabilities, being injured during performance, excessive breeding of animals to produce good performers and wastage and euthanasia of those animals that don't perform at the required level. Do we, as a society, need to take a look at these problems and decide how we can make improvements to increase the welfare of animals being used in this way, or indeed, if they should be used in this way at all?

One area which has seen some major improvements in recent years is the use of animals for display. Circuses and zoos of the eighteenth and nineteenth centuries were more of the nature of freak shows than serious attempts to entertain, conserve, educate or inform. However, in the 21st century, undoubtedly partly due

to the growth in wildlife documentaries that started appearing in the 1970s, people were able to gain insights into the nature of the animals and as a result, started to question the keeping of animals in zoos and circuses. Keeping and training exotic and wild animals, which are not used to living with humans as domesticated animals are, is likely to cause stress and consequently the keeping of these animals in circuses has now been restricted or prohibited in many countries. Holding the same types of animals in zoos however, remains common practice for reasons of entertainment, education or conservation but animals held in this way can be severely restricted in their ability to behave 'naturally' and express their behavioural needs.

So, what are our ethical obligations towards animals used for entertainment and recreation? It is suggested that the motivation for using animals is important, but that the necessity to use animals for entertainment is less obvious than the necessity to use them for food and fibre. Should, therefore, any compromises to their welfare associated with entertainment be considered reasonable than uses in a production husbandry system? With this in mind, when keeping animals in zoos or circuses, in racing and other sports do we arguably have an obligation, compared with other uses, to meet higher standards of welfare, by providing more enriched environments, better social relationships etc? Would this have the added benefit of helping people to understand the animal's natures, welfare needs and impacts of human interactions?

The National Animal Welfare Advisory Committee (NAWAC) is currently working to develop a discussion document which it is anticipated may develop into a code of welfare for animals in entertainment. During the development of the discussion document the committee will be grappling with the issues as outlined above before developing a number of minimum standards

and recommended best practices that state the requirements that New Zealanders must meet if using animals for sporting or recreational purposes.



A chameleon at Wellington Zoo

To be notified when this code or discussion document is released for public consultation, you can sign up for alerts on <http://www.biosecurity.govt.nz/lists/> – select the Animal Welfare link.

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In light of the work on “Animals in Entertainment” currently underway, the National Animal Welfare Advisory Committee held their August 2013 meeting at Wellington Zoo. This gave the Committee the chance to go behind-the-scenes as they viewed some of the animals that are involved in contact visits with the public. Zoo staff member Simon Eyre, chair of the Accreditation and Animal Welfare Committee of the Zoos and Aquarium Association (ZAA), also talked to NAWAC about how animal welfare will be assessed amongst its member zoos and aquariums. For a full summary of NAWAC's August meeting please see our [website](#).

Sustainable intensification – an Oxymoron?

Can we intensify animal production systems without a loss of welfare?

There is considerable debate about the effects of the intensification of animal production systems on animal welfare. Many non-governmental organisations argue that welfare is inevitably compromised in such systems. However, their assertions need to be scrutinised, there is also evidence that animal welfare can be maintained or improved in some intensive husbandry systems. The veterinary profession has a responsibility to provide advice and commentary on intensive animal farming systems that is both scientifically and ethically balanced.

In New Zealand today the average dairy herd has 400 cows, about 350 specialised pig farms produce our domestic pork, 90 percent of our egg production comes from less than 60 farms, most using battery cages, and over 80 million 6-8 week old chickens produce about 165,000 tonnes of our most consumed meat. Also 1,000,000 deer are farmed for venison and velvet production and there are some intensive beef feedlots.

While intensification has led to enormous progress in disease control, nutrition and genetics, with many welfare gains, there have also been some major losses of animal welfare. Battery cages for laying hens and sow crates are the most evident examples but negative welfare impacts can be identified for most forms of intensification. It is likely that society will consider many existing or emerging husbandry practices associated with intensification to be unacceptable.

The eminent bioethicist, Professor Bernie Rollin, of Colorado State University, considers that innovative and emerging technologies and practices often generate an “ethical vacuum”: if the proponents of the new technology or informed observers don’t comment on the ethical, as well as the scientific or productivity benefits of the new technology, those opposed to the technology soon will and will use their ethical views to drive the debate.

Veterinarians have a unique responsibility to understand the scientific and ethical content of the moral dilemma of providing for an increasing global demand for high quality animal products without further harming the welfare of the animals we use. Veterinarians have the responsibility to advocate for enhanced welfare as a condition for intensification. The welfare of farm animals should be central to any considerations of the development of new technologies, land management techniques, building design and genetic selection for intensive production systems.

For example, there are widespread concerns that cows in fully housed dairy operations in New Zealand have poor welfare. However, with careful planning and management fully housed cows can have very high levels of welfare.

Many large dairy herds that spend their entire lives outdoors can have poor welfare at times during the year. The provision of shade and shelter for outdoor grazing is still inadequate on many dairy farms and while the use of housing for climatic shelter and stand-off pads is increasing there are cases of poor welfare because these facilities are poorly designed or misused.

Another potential welfare problem related to dairy intensification is the risk of a skills gap developing between the cow handlers and the increasingly complex welfare demands of intensive production systems.

These problems have potential solutions:

- The New Zealand dairy industry is learning quickly to manage the challenges of new farming methods, larger and heavier cows, new locations and more extreme climatic conditions.
- Industry training programmes are providing farm workers with the necessary skills.



- The industry recognises the risks of unregulated intensification and is embracing self-regulation.
- Economic forces such as supply-chain quality management programmes and incentives for improved welfare products from large corporate purchasers will also drive improved welfare. For example in Australia and Europe fast-food and supermarket chains are providing a lead in requiring welfare standards well in excess of local legal requirements.

These are grounds for optimism that the mega-farms of the future will contain animals more content than those found on most farms today.

John Hellström

Chair

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This is a précis of a paper presented to the 2013 NZ Veterinary Association Conference.

Codes of welfare – update on consultation, development and review since *issue 15*

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.

Recommended to the Minister

- Rodeos

In post-consultation process

- Equines
- Dairy Housing

Under development

- Temporary Housing of Companion Animals
- Saleyards

A complete list of the codes of welfare can be found on our [website](#).

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Appointments to NAWAC

The Minister for Primary Industries recently appointed Ms Katie Milne to the National Animal Welfare Advisory Committee and reappointed Ms Sue Brown for a second term.



Katie Milne was nominated by Federated Farmers of New Zealand and replaced Don Nicolson who had served on the committee for six years. Along with her partner Ian Whitmore, Katie owns a farm at Rotomanu which is in the heart of the West Coast just east of Lake Brunner. They milk around 200

Jersey cows on a pasture-based system supplying Westland Milk Products. They also do some local contracting making baleage, silage, and effluent spreading via slurry tanker and muck spreader.

Katie current chairs the local TB Free committee, is President of West Coast Federated Farmers and has been elected onto the national board of Federated Farmers. Prior to taking up farming, Katie worked in the local meat processor or “freezing works” and was a sales representative for Livestock Improvement Corporation. Her off-farm interests include tramping, diving, hunting, water sports on the lake, snow skiing, bird watching and, more recently, aviation as Ian has his pilot's licence.

Sue was originally nominated by the Ministry of Women's Affairs and provides knowledge and experience of “the public interest in respect of animals”.

A chartered accountant, Sue has extensive senior management experience in various financial and executive management roles. Her industry experience at a senior executive level includes experience in veterinary practice, the aged care industry, New Zealand Police and local government. She and her husband also run a 200 acre deer farm in Northland.



Asia – the new frontier for humane and sustainable agriculture

As Asia goes through rapid change to keep up with its accelerating population growth The World Society for the Protection of Animals (WSPA) is on the ground offering practical experience and skills to prevent factory farming systems, where large numbers of animals are kept together under highly restrictive conditions, from becoming embedded in the region and, inevitably, in the culture.

Rob Gregory, Regional Programme Director for Humane and Sustainable Agriculture for WSPA is leading the charge; a vastly different challenge from his former roles in New Zealand. With the now Ministry for Primary Industries he first worked with the National Animal Welfare Advisory Committee on some of the first codes of animal welfare and then as a Senior Animal Welfare Policy Analyst he helped review the Animal Welfare Act.

Rob says: “To provide context, Asia for simplicity sake is where Europe was around 40 years ago in terms of animal welfare. This naturally makes it difficult to discuss animal welfare when you are asking those, who can make positive change, to make not just a small change, but a quantum leap in their animal husbandry practices. The key is therefore not to go in with a ‘Western approach’, but with an understanding of the situation so we can move forward, for the sake of the animals, and not just continue to talk at crossed purposes.”

As a result, the WSPA approach is to make it work for the animals for the situation they are in; not just promoting one system for one topic or situation. Instead it is about working out a ‘sustainable and fit-for-purpose’ solution for China, India and Indonesia, with each of these countries (and the situations at hand) requiring different approaches.

“With the economic argument being probably the only unifying factor across these countries; we can flip this around by leveraging individual production ‘issues’ that these countries are experiencing, to demonstrate that sustainable animal welfare can bring economic reward not just cost,” says Rob.

“In China, for example, a big issue and driver of change is food safety. To improve the quality and safety of animal-based food products we can help establish animal welfare standards and

encourage animal welfare improvements on the farm. Industry players, some of whom are enormous by New Zealand standards, can then charge a premium price to meet the market demand for safe food products; making it a ‘win-win’ for the animals and the industry.

“India on the other hand is responding to a lack of production capacity. At present it is only producing around half of its milk requirements, with many commercial dairy animals suffering increased lameness, mastitis, fertility problems and heat stress. To really improve production and make the industry sustainable, these and many more, animal welfare issues need to improve,” says Rob.

Across China, India and Indonesia, Rob and the WSPA teams are working with key-stakeholders to make these fundamental and sustainable shifts in animal welfare start to happen:

“Our work is about using our skills and networks as an international organisation, to achieve long-term sustainable change with people that have the ability to make definite changes to improve the lives of hundreds of millions of animals in the region. We are literally moving the world to protect animals in this respect.”

“As a result we are building critical relationships with Governments, NGOs, Industry groups, companies and individual farmers, in these countries, to embed animal welfare in their thinking and decision making. This will be a huge achievement in itself and will set the stage for further improvement as we continue. And when you couple this with the numbers of animals



we are working for – 50 million commercial dairy animals in India, over 500 million pigs in China and hundreds of thousands of cattle in Indonesia – the commitment to keep on pushing forward naturally becomes all the more powerful.”

Elaine McNee
Communications Officer
The World Society for the Protection of Animals
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Across our desks

A selection of interesting items from journals which have crossed our desks.

Ethical considerations for field biology studies

This issue of the Institute for Laboratory Animal Research's journal is devoted to wildlife field studies and the differences between such research and laboratory animal research and the consequences for IACUCs (animal ethics committees).

[ILAR Journal \(2013\). 54 \(1\)](#)

Opioid analgesia in hens with bone fractures

Laying hens were trained to associate different coloured environments with either opioid or saline administration and then were allowed to choose between the two environments in a choice test. Birds with healed keel bone fractures chose to move to the environment that they associated with the administration of the opioid, whereas birds with no fractures had no preference, suggesting that the opioid was chosen by the hens with healed fractures as they were experiencing pain as a result of the fracture and chose the opioid for its analgesic effect.

[Nasr, M.A.F. et al. \(2013\) Applied Animal Behaviour Science 147 \(1-2\), 127-131](#)

Play behaviour to indicate animal welfare in dairy calves

Calves were either subjected to disbudding with no pain relief, with application of a local anaesthetic alone or together with a non-steroidal anti-inflammatory drug, and levels of play assessed. Calves disbudded without a local anaesthetic and non-steroidal anti-inflammatory drug showed less play behaviour 3 hours after the procedure than those that received local anaesthetic alone or no pain relief, suggesting play behaviour is less likely to occur when welfare is compromised.

[Mintline, E.M. et al. \(2013\). Applied Animal Behaviour Science 144, 22-30](#)

Attitudes towards catch and release fishing

A survey was distributed to the general public in New Zealand to assess feelings and perceptions on catch-and-release fishing and pain and survival in fish. Most respondents, especially the younger respondents, believed that fish had the capacity to feel pain. The study indicated that providing education to anglers in New Zealand about positive angling practices may have beneficial effects and the general public may support the future development of regulations to ensure that fish welfare is not compromised.

[Muir, R., et al. \(2013\). Animal Welfare 22, 323-329](#)

Pathological observations in dead-on-arrival broilers

A large number of broiler chickens arrive dead at slaughtering facilities each year in Denmark and this study assessed the pathology of 300 of these birds and found that most died of lung congestion or trauma. 74% were thought to have died as a result of events during pre-slaughter handling which suggests that improvements could be made during this process to improve welfare in broiler chickens.

[Lund, V.P. et al. \(2013\). British Poultry Science 54 \(4\), 430-440](#)

Your feedback

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

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

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

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

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The tail end



Here is your opportunity to showcase animals by submitting a photo to Welfare Pulse. The theme is “people and animals” and can be a pet, production animal or an animal in the wild. Send your high-resolution image to animalwelfare@mpi.govt.nz by 1 February 2014 for your chance to be published in the next issue.

Photographers must be the sole author of the entries and hold intellectual property rights to them. Photos must be submitted with a title and caption.