

National Animal Welfare Advisory Committee

Annual report 1 January to 31 December 2007

National Animal Welfare Advisory Committee
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New Zealand

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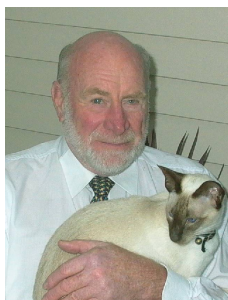
2008

August

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Overall, 2007 was a busy year for the National Animal Welfare Advisory Committee (NAWAC or the Committee) but very satisfying in terms of what was achieved. This did not just happen. It took a lot of dedicated work by members of the Committee past and present, ably and diligently supported by the Ministry of Agriculture and Forestry (MAF) Animal Welfare Directorate. Because NAWAC members and MAF staff are prepared to work as hard as they do, my job as Chairman is busy but stimulating, enjoyable and never a chore.

1.1

Codes of Welfare

Development of codes of welfare continues to be the main thrust of NAWAC's work. The code of welfare for the commercial slaughter of animals which was begun in 2002 was completed and NAWAC has recommended that the Minister of Agriculture issue the code. Completing the code required a number of difficult issues to be resolved through a detailed examination of the available research, careful attention to the requirements of the law and consultation with affected parties. An underpinning principle is the requirement that animals be insensible prior to any knife cut and remain so until death through blood loss supervenes. Some derogation from this principle has been provided for the Jewish ritual slaughter "shechita" using the "exceptional circumstances" provision of the Animal Welfare Act.

Completion of a research project in 2006 looking at the welfare of broiler chickens in New Zealand will allow NAWAC to review the minimum standard relating to maximum stocking density in broiler sheds as foreshadowed in the 2003 broiler code. The Minister has agreed that the review of the broiler code proceed in two stages: the first, to be completed in 2008, being a specific review of the stocking density minimum standard; and the second to be a comprehensive review that will convert the minimum standards in the code to animal-focused, welfare-outcome standards accompanied by indicators that will enable the achievement of these outcomes to be measured or assessed. We have identified a substantial body of New Zealand and overseas research that makes this approach to minimum standards for broilers a practical reality. The second stage is to be completed in 2009.

During the year, we made good progress in advancing codes for dairy cattle, sheep and beef cattle, dogs and the transport of animals within New Zealand.

1.2

What is "animal welfare"?

The starting point for the development of a code of welfare is the determination of whether the production system on which the code is based allows the animals to enjoy an acceptable standard of welfare – or, more precisely, does the production system allow the owner or person in charge of the animals to discharge their responsibility to meet the physical, health and behavioural needs of the animals as required by the Animal Welfare Act? The Act defines these needs in terms of food and water, shelter, physical handling, protection from injury and disease, and the ability to express natural behaviours.

The minimum standards in codes cannot require owners to meet a higher standard than is required by the Act. However, codes include recommended best practices which are intended to encourage owners to aspire to higher standards than are required by minimum standards.

Sometimes there is disagreement with NAWAC's determination of the starting point. Some farming systems and practices, particularly in the intensive industries, are the subject of widespread criticism that is based on ethical or value judgements rather than on fact founded on science. Societal views about animal welfare are not bound by science or the law and are often vicariously influenced by campaigns which focus on particular aspects of welfare such as constraints on the ability of animals to behave in a natural way. All too often these campaigns are narrowly focused on one aspect of welfare and fail to spell out the consequences to the animals concerned of changing the systems they condemn. However, NAWAC is bound by the law to have regard for good practice, scientific knowledge and available technology among other things, and the judgements we make are founded on those criteria.

More importantly, while the Animal Welfare Act is a crucially important statement of New Zealanders' views about animal welfare, and in particular the welfare "bottom line", it is a blunt instrument when it comes to how the New Zealand animal industries offer assurances to society and consumers about the welfare status of their animals. This was one of the reasons that led NAWAC to explore this issue in more depth.

1.3

Welfare indicators and welfare quality assurance

In our strategic planning, we identified the need to devote time to discussion of "big picture" matters that are likely to impinge on our work. The topic chosen for the 2007 discussion was "key indicators for assessing animal welfare". The discussion spanned a range of issues including:

- NAWAC's commitment, as far as is possible, to write minimum standards as statements of welfare outcomes to be achieved from the animal's perspective rather than as prescriptions of facilities or inputs;
- a need to be able to measure or assess the welfare status of animals, and in particular whether the intended welfare outcomes have been achieved;
- an emerging demand by society and by consumers for assurance that the animal products they use or consume are derived from animals which enjoy at least an acceptable standard of welfare;
- a dependence by most consumers on third parties to provide the assurance they require, which has led to a host of labelling schemes in Europe and North America where the label implies that certain standards have been met. The New Zealand equivalent schemes are the free-range egg and pork programmes sponsored by the Royal New Zealand SPCA. These schemes have heightened the need to be able to measure the welfare of animals in an objective way and even to distinguish between "acceptable" and "good" welfare; and
- the respective roles and responsibilities of government and industry organisations in regulating animal welfare and giving assurances, and the potential for a partnership relationship to develop a "New Zealand Inc" approach.

We concluded that the topic warranted discussion in a wider forum, and we decided in partnership with MAF Animal Welfare Directorate to seek industry support for a workshop in 2008.

Research priorities

One of NAWAC's responsibilities is to advise the Minister on areas where research on animal welfare is required. Dr Mark Fisher completed a project on our behalf in which he reviewed the priorities developed in 2002 and consulted a wide range of stakeholders.

From his report NAWAC extracted and published a revised set of priorities which have been circulated to funding agencies and research organisations. The priorities fall into two groups: operational research to assist NAWAC to develop animal welfare codes that have a solid scientific basis; and more strategic research aimed at positioning New Zealand's approach to animal welfare at the forefront of world best practice.

The operational research priorities include:

- a survey of the welfare of broiler chickens (completed);
- a survey of the welfare of layer hens under current management systems (under way);
- furnished cages as an alternative to current cages for layer hens (under way);
- management of pregnant and farrowing sows and alternatives to confinement systems;
- delivery of pain management technology during painful husbandry procedures;
- the body condition score for cattle that equates to compromised welfare; and
- humane slaughter methods for eels and lobsters.

The strategic research priorities include:

- the fitness of particular animal genotypes and phenotypes for the environment and system in which they live, especially related to:
 - increases in animal production;
 - desirable aesthetic features in companion animals; and
 - adaptations which may be required by climate changes;
- issues affecting farm animals in modern farming systems, especially:
 - lameness in dairy cows;
 - parasitic and infectious diseases in animals kept in high densities; and
 - the demands on skilled stockmen to care for more animals in less time, and the increasing number of inexperienced persons caring for animals on lifestyle blocks;
- issues emerging from developments largely in other countries, especially:
 - a requirement to positively enhance animal welfare rather than to merely avoid negative outcomes; and
 - the link between the safety and quality of animal products and animal welfare;
- responding to international initiatives requiring objective assessment of animal welfare outcomes as part of the routine of commercial farming including determining key measures, monitoring animals, and assessing compliance and performance;
- the relative importance of various animal welfare needs (e.g. adequate food, opportunities for normal behaviour), especially:
 - how they should be accommodated in various systems; and
 - how constraints on any one need can be justified by benefits of another (e.g. reducing sow mobility to increase piglet survival); and
- the relevance of animal welfare expectations, derived from more intensive farming systems, to New Zealand's characteristic extensive pastoral farming.

Electroimmobilisation

In our 2006 annual report, I referred to the lack of any obligation on those who promote and sell devices used on animals to undertake any assessment of the welfare impacts of such devices. This contrasts with the strict requirements for veterinary remedies.

Through the good offices of NAWAC member Dr Gwyneth Verkerk, the cooperation of the marketer, and funding from the Agricultural and Marketing Research and Development Trust and Dexcel (now DairyNZ), behavioural and physiological measurements of the effects of one form of electroimmobiliser device allowed us to conclude that the device presented minimal risk to the welfare of cattle if used in accordance with the conditions described in its brochure.

While there was a satisfactory outcome in this case, NAWAC is not in a position to arrange such testing on a routine basis. This leaves us in a dilemma when we become aware of other devices being advertised for sale. Do we ignore them or take some action? We have chosen the latter course knowing that we have only the power of persuasion.

The Animal Welfare Act makes provision for prohibiting or restricting the use of traps and similar devices for pest control, but the testing of them is funded through MAF's operational research budget and the manufacturer/marketer has no obligation beyond submitting them for testing.

1.6

Acknowledgements

During the year, Mr Charlie Pedersen retired from the Committee having completed two terms as a member, Mrs Edna McAtamney was forced to retire through ill health and Dr Wayne Ricketts retired following his resignation from MAF. The contribution of Mr Pedersen and Dr Ricketts to the Committee's work was highly valued and will be missed.

New members are Mr Don Nicolson, Mrs Peggy Burrows and Dr Roger Poland. Each brings a set of unique skills and experience to the Committee and I am particularly grateful to them for their willingness to come up to speed with the work programme, no mean feat given the range and complexity of matters we are dealing with.

It is a pleasure to once again acknowledge the support of MAF Biosecurity New Zealand, Dr David Bayvel and the Animal Welfare Directorate, and the special contributions of Ms Joanna Tuckwell, Dr Cheryl O'Connor and Dr Kate Littin.

Dr Peter O'Hara

Chairman

2 New Zealand Animal Welfare Infrastructure

2.1 Legal status of the Committee

NAWAC is a statutory committee under the Animal Welfare Act 1999. It functions to advise the Minister of Agriculture on issues relating to the welfare of animals, and to develop and advise on codes of welfare. This role was previously undertaken by the Animal Welfare Advisory Committee (AWAC).

2.2 Infrastructure

A variety of individuals and groups have an interest in the welfare of animals in New Zealand. The organisations with formal input into animal welfare policy and practice are summarised in the diagram below. In addition to these groups, members of the public provide input into codes of welfare through the consultation process.



2.3 Legislation

The Animal Welfare Act 1999 came into force on 1 January 2000, and has been amended by Animal Welfare Amendment Acts in 2000, 2001 and 2002. In 2005, it was further amended, extending the time within which an information may be laid in respect of an offence committed on or after the date the amendment came into force, from one year to two years (section 167).

3.1

Process for development of the codes and consultation

The formal process for the development of codes of welfare includes:

- the preparation of a draft code by the Minister, NAWAC or any other person (usually this is undertaken by a group of people with knowledge of the species of animal, and its care and management);
- consultation with representatives of the persons likely to be affected by the code;
- consideration of the code by NAWAC to ensure that:
 - it complies with the purposes of the Act;
 - it is clearly written so as to be readily understood; and
 - persons likely to be affected by it have been consulted;
- public notification and invitation for submissions on the draft code;
- finalisation of the code by NAWAC having regard to:
 - the submissions received;
 - any consultations undertaken;
 - good practice and scientific knowledge in relation to the management of the animals;
 - available technology; and
 - any other relevant matters;
- in exceptional circumstances, having regard to the feasibility, practicality and economic effects of changing from current to new practices, and the requirements of religious and cultural practices, NAWAC may recommend minimum standards that do not comply with the general requirements of the Act (see section 73(3));
- NAWAC may undertake a second consultation process, giving interested groups an opportunity to comment on any proposed changes to the draft and/or present any new information; and
- submission of the code to the Minister with NAWAC's recommendation as to whether or not it should be issued.

The Minister may make any changes to the code, issue it by a notice in the Gazette, refer it back to NAWAC or decline it.

3.2

Activity in 2007

NAWAC continued to develop codes of welfare during the year, with codes for companion cats and deer being issued by the Minister in March and May respectively.

A minor amendment clarifying the definition of “cages” in the layer hen code of welfare was issued in September.

The draft commercial slaughter code was recommended to the Minister in September for issuing.

Submissions received on the draft dairy cattle code were considered by NAWAC during the year and the code is due to be finalised during 2008. A draft dog code was reviewed by NAWAC and publicly notified in September. This will be progressed during 2008.

A draft sheep and beef cattle code was received by NAWAC in November and will be progressed in 2008.

Codes for transportation of animals within New Zealand, camelids, and temporary housing (including boarding establishments) were progressed by writing committees during the year and are at various stages of development.

Further progress was also made by NAWAC towards refining the format of codes, and towards standardising text that is common to all codes.

Additionally, NAWAC has established a subcommittee to consider the broader issue of how consultation on codes could be undertaken in the future.

See also the Chairman's Comment in this report.

3.3 Codes of recommendations and minimum standards

The AWAC codes of recommendations and minimum standards remain as voluntary codes. They remain very useful documents and are listed in Appendix 1.

3.4 Publication and availability

Codes are available from MAF. A number of copies are issued free of charge to groups affected by the code and to key organisations (e.g. the Royal New Zealand SPCA, Federated Farmers of New Zealand and the New Zealand Veterinary Association). See Appendix 1 for a full list of codes of welfare and codes of recommendations and minimum standards.

Codes are available from:

Animal Welfare Directorate
MAF Biosecurity New Zealand
Ministry of Agriculture and Forestry
PO Box 2526
Wellington 6140
New Zealand
Telephone 04 894 0366
Facsimile 04 894 0747
Email animalwelfare@maf.govt.nz

A charge may be made for bulk orders. Codes are not protected by copyright and may be photocopied. Most codes, including all new codes when they are issued, are available on the internet at <http://www.biosecurity.govt.nz/animal-welfare/>.

4 The Year's Issues

4.1 Deer velveting

The continued use of tight rings to provide analgesia permitting velvet antler removal from yearling spiker red and wapiti deer is being considered by NAWAC. The possible pain associated with ring application and the effectiveness of the resulting analgesia require further clarification with the deer industry. The industry's research results are due to be presented in a final report to NAWAC in June 2008. An interim update was provided to NAWAC in November 2007.

The National Velvetting Standards Body audit report for 2006/2007 was presented to NAWAC in November.

4.2 Poultry Research Advisory Committee

The Poultry Research Advisory Committee, established in 2006, is overseeing two research proposals:

1. a welfare assessment in the various management systems currently available in New Zealand; and
2. development of a facility containing conventional cages and two forms of large furnished cages, to be run as a commercial operation but with information on the welfare of the birds being recorded.

MAF operational research funding was approved for the first project, and the MAF Sustainable Farming Fund provided funding for the second project.

The Committee endorsed an outcome-based minimum standards approach to writing codes of welfare, which was considered to be suited to the broiler and layer hen codes in particular, because of the extensive body of research on the welfare of poultry and the indicators of good and bad welfare outcomes.

The Committee considered the March 2006 MAF operational research report on Key Indicators of Poultry Welfare in New Zealand (the broiler welfare report) and advised NAWAC on its implications for the review of the broiler code in 2009.

See also the Chairman's Comment in this report.

4.3 Pork Industry Board Liaison Committee

The Pork Industry Board Liaison Committee allows NAWAC to keep abreast of current welfare issues arising from the pork industry. The focus during 2007 was on proposed research into alternative sow housing systems, and research to consider how to measure key welfare criteria, both in relation to the planned review of the pig code in 2009. Both research projects have received funding and have commenced.

4.4 Electroimmobilisation

The results of the study into the Newtek Pacifier were reported to the Committee in February. The Committee concluded, on the basis of the evidence before it, that, subject to caveats about appropriate use of the device, it should not be prohibited on animal welfare grounds.

It was noted that NAWAC's recommendation to the Minister that electroimmobilisation devices be prohibited may need to be reformulated as a recommendation for the restriction of such devices, in view of developments since the recommendation was first made. The substance of the original recommendation is expected to be addressed by a future Order in Council.

During the year NAWAC became aware of an advertisement for the “Little Seizer” electroimmobilisation device on the online auction website TradeMe. An approach was made to both the advertiser and TradeMe to express NAWAC and MAF concerns regarding the advertising of the device. The outcome was that TradeMe agreed to request that the seller modify the terms of the advertisement to recognise these concerns.

See also the Chairman’s Comment in this report.

4.5 Surgical procedures

NAWAC agreed that public concern and uncertainty among practitioners around surgical procedures needed to be addressed through appropriate communication. The Committee agreed that it would continue to address significant surgical procedures on a case-by-case basis.

4.6 Pain Relief Workshop

NAWAC held a stakeholder workshop in 2006 to discuss the future use of relief for painful conditions in production animals. Its objective was to develop a forward-looking research and development programme. NAWAC has the objective that all painful husbandry procedures should ideally be performed with appropriate analgesia. Current restrictions on who can use pain-relieving drugs, and the limitations of available technology for administering them, prevent wider use of pain management. NAWAC is continuing to address this issue and the other outcomes from the workshop.

4.7 Traps

NAWAC’s recommendations for the prohibition of specified leghold traps and rodent glueboard traps were progressed during the year. A discussion paper on leghold traps was released for comment in the middle of the year. Resulting regulations to prohibit/restrict leghold traps came into force on 1 January 2008. With regard to glueboard traps, New Zealand Food Safety Authority advice is being sought before a discussion paper is released.

4.8 Incendiary devices for bird control

The Committee received a request from the Minister of Agriculture for advice regarding the use of incendiary devices for bird control. NAWAC took the view that the treatment of wild animals when being hunted or killed, although not covered by the Animal Welfare Act, should not result in unnecessary or unreasonable pain or distress. NAWAC also noted that, while a ban or restriction on the use of incendiary devices for roost control of birds might avoid a particular event, it would not address the wider issue of managing the risks to animal welfare associated with any technique or combination of techniques used for pest control. Rather, attention should be paid to managing risks (including animal welfare risks) associated with pest control. NAWAC’s view was that the law should require the developer, marketer and users of “devices” (adopting the broader dictionary definition, rather than the limited definition in the Animal Welfare Act) to ensure that animal welfare risks associated with the use of such devices be assessed and managed.

4.9 Review of New Zealand policy on the export of livestock for slaughter

NAWAC made a submission on the measures being proposed as a result of MAF’s review of policy on the export of livestock for slaughter. The submission emphasised NAWAC’s view that the whole export process – from transportation, to handling on arrival, to slaughter – needed to be taken into account when considering the risks associated with this trade.

Arising from the review, the Minister requested NAWAC's advice on the need to prioritise a code of welfare for the transportation of livestock for all purposes. Subject to the availability of funding, NAWAC requested an independent report assessing the transport environment as a whole, including how current standards fitted together and whether or not they might be integrated into a single code of welfare. This report was subsequently commissioned in early 2008.

4.10 Welfare indicators and welfare quality assurance

In conjunction with its August meeting, NAWAC scheduled a half-day discussion on welfare indicators and welfare quality assurance. It was agreed that this discussion would form the basis of a second stakeholder workshop in 2008.

See also the Chairman's Comment in this report.

5.1

Operational research

In order to provide sound information for policy development and to underpin the activities of government departments, MAF commissions operational research in areas where there is a lack of suitable information. Since 1993, some 100 animal welfare research projects have been funded (see Appendix 3 for details). In the 2006/2007 financial year, the following projects were funded and completed:

- Landcare Research NZ Ltd: improved humaneness of vertebrate toxic agents;
- Landcare Research NZ Ltd: test killing performance of traps for the control of vertebrate pests; and
- Massey University: chronic or long-term lameness in dairy cattle.

The following study was begun in the previous year and completed in 2006/2007:

- AgResearch Ltd: humaneness of dry-off procedures used in the dairy industry.

Other studies which have been funded and which are ongoing include:

- Massey University: the welfare status of newborn lambs;
- Kotare Bioethics Ltd: the welfare of beef cattle; and
- Massey University: switch removal in dairy cattle.

Operational research projects which began in the 2006/2007 financial year were:

- AgriQuality Ltd (nowASUREQuality Ltd): comparative assessment of layer hen welfare in New Zealand;
- Massey University: indicators for the on-farm welfare assessment of pigs; and
- AgResearch Ltd: impacts of New Zealand dairy housing systems on dairy cow welfare.

5.2

Sustainable Farming Fund

The Sustainable Farming Fund, which is administered by MAF, supports projects that contribute to the ongoing economic, environmental and social wellbeing of the country's primary producers. In 2007 three animal welfare research projects were funded:

- Egg Producers Federation: evaluation of furnished cage systems for the NZ egg market;
- New Zealand Pork Industry Board: world leading sustainable sow management; and
- NZ Llama Association: development of a New Zealand code of welfare for llamas.

5.3

Research priorities

Animal welfare science can contribute to enhancing animal welfare in many areas. The topics described below were identified as being NAWAC's highest priorities following a comprehensive survey completed in 2007. All relate to issues in the development or review of codes of welfare which are or are likely to be contentious. NAWAC will actively pursue funding for these topics, some of which are already being addressed through industry initiatives. They are:

- the welfare and performance of New Zealand broilers compared with international standards;
- comparison of current cage systems with alternative cage (including enriched) and non-cage systems for layer hens;
- the wider use of pain relief when undertaking painful husbandry procedures;
- aggression in sows, especially following mating, and ways to manage it through feeding and housing systems, genetic improvement and stockmanship;
- body condition score of dairy cattle and the point at which welfare is compromised and suffering occurs;
- objective assessment of animal welfare outcomes including determining the key measures, monitoring animals, and assessing compliance and performance; and
- humane slaughter methods for crabs, rock lobsters, crayfish and eels.

See also the Chairman's Comment in this report.

6

The Committee

6.1

Legal requirements and selection of appointees

NAWAC consists of a chairperson, the National Animal Ethics Advisory Committee (NAEAC) chairperson and up to nine other members with knowledge and experience in:

- veterinary science;
- agricultural science;
- animal science;
- the commercial use of animals;
- the care, breeding and management of companion animals;
- ethical standards and conduct in respect of animals;
- animal welfare advocacy;
- the public interest in respect of animals;
- environmental and conservation management; and
- any other area the Minister considers relevant.

Members are appointed to NAWAC by the Minister after consideration by the Cabinet Appointments and Honours Committee and the Cabinet. Appointments are generally for a three-year term, although members may be reappointed for a second term and, in exceptional circumstances, a third. Members serve in a personal capacity and not as representatives of their employer or nominating body.

6.2

Membership

Members	Expiry of Appointment
Dr Peter J O'Hara BVSc (Hons), PhD, MACVP, retired public servant (MAF) (independent Chairman)	31.10.09
Mrs Margaret (Peggy) Burrows JP, MA (Hons), BEd, Dip Tchg, TTC, secondary school principal (nominated by Ministry of Women's Affairs)*	31.10.10
Mr Hilton E Collier BAgSc, registered farm management consultant (nominated by Te Puni Kokiri)	31.10.09
Dr Philip E Cowan BSc (Hons), PhD, Science Leader Pest Control Technologies, Landcare Research NZ Ltd (nominated by Landcare Research NZ Ltd)	31.10.08
Dr Selwyn S A Dobbinson BVSc, MAppSc (Immun), Dip Mic, registered veterinary specialist (nominated by New Zealand Veterinary Association)	31.10.08
Mr John R Martin QSO MA (Hons), consultant (Chairperson of NAEAC)	31.10.09
Mrs Edna J McAtamney QSM, Councillor Central Otago District Council, Otago Conservation Board member (nominated by Ministry of Women's Affairs)*	31.10.09
Mr Donald O Nicolson farmer, National Vice President Federated Farmers (nominated by Federated Farmers of New Zealand)*	31.10.10

Mr Charles W Pedersen DipTchg, TTC, farmer, National President Federated Farmers (nominated by Federated Farmers of New Zealand)	31.10.09
Dr Roger A Poland BSc (Hons), DVM, Senior Adviser Animal Welfare, MAF Biosecurity New Zealand (MAF nominee)*	31.10.10
Mrs Jenifer M Prattley National Vice-President Royal New Zealand Society for the Prevention of Cruelty to Animals (nominated by Royal New Zealand SPCA)	31.10.09
Dr Wayne Ricketts BAgSc, DipAgSc (Animal Behaviour), BVSc, Dip Animal Welfare, Compliance Team Manager Compliance and Enforcement Group, MAF Biosecurity New Zealand (MAF nominee)*	31.10.08
Professor Bruce J Ross MAgSc, agricultural economist, Professor Emeritus Lincoln University (independent appointment)	31.10.09
Dr Gwyneth A Verkerk BVSc, DPhil, MACVSc, veterinarian and welfare scientist (nominated by NZ Society of Animal Production)	31.10.09

* Mrs Edna McAtamney resigned from the Committee as of 22 July 2007 due to ill health and was replaced by Mrs Peggy Burrows. Mr Charles Pedersen retired from the Committee on 31 October 2007 having served two three-year terms and was replaced by Mr Donald Nicolson. Dr Wayne Ricketts resigned from the Committee as of 15 June 2007 to take up a position with the New Zealand Veterinary Association and was replaced by Dr Roger Poland.

6.3 Secretariat

Ms Joanna Tuckwell served as Secretary of NAWAC for 2007 and Ms Haley Shepherd as Assistant Secretary. Dr Wayne Ricketts, Dr Cheryl O'Connor, Dr Kate Littin, Ms Kirsty Grant, Ms Linda Carsons, Dr Roger Poland and Mrs Margaret Handscomb of MAF, and Dr Virginia Williams, also provided excellent support and assistance to the Committee.

6.4 Deputy Chairperson

Dr Selwyn Dobbinson served as Deputy Chairperson for 2007.

6.5 Fees

The daily fee for members was \$375 per day until 28 February 2007 and \$400 per day thereafter (\$475 and \$550 respectively for the Chairperson). This fee is paid for attending meetings plus up to two days for preparation time. Members are also reimbursed for travelling expenses. In addition, the Chairperson and, on occasion, other members may be paid additional fees for representing the Committee at other meetings or for carrying out significant extra work on the Committee's behalf. The following table shows fees paid in 2007.

Member	Fees paid during 2007 (gross)
P O'Hara ¹	\$17,185.00
P Burrows	\$440.00
H Collier	\$3,467.00
P Cowan ²	\$1,562.00
S Dobbinson	\$6,250.00
J Martin	\$3,400.00
E McAtamney	Nil
D Nicolson	Nil
C Pedersen	Nil
R Poland ³	Nil
J Prattley	\$2,765.50
W Ricketts ³	Nil
B Ross	\$4,284.60
G Verkerk	\$4,362.50

¹ The Chairman undertook extensive liaison with animal welfare, industry and other groups, and with MAF, regarding the writing and content of draft codes of welfare and regarding other NAWAC business, in addition to preparing for and conducting formal NAWAC meetings and special meetings.

² Dr Cowan's fees were paid directly to his employer as recompense for time lost from his primary employment.

³ Dr Poland and Dr Ricketts were employed by MAF and thus did not receive meeting fees.

6.6 Operations

6.6.1 Meetings

NAWAC holds four ordinary meetings per year. Attendance at the ordinary meetings for 2005-2007 is shown below. Additional meetings were held to consider codes of welfare.

Member	22/02/05	26/05/05	09/09/05	07/12/05	15/02/06	17/05/06	13/09/06	22/11/06	21/02/07	16/05/07	22/08/07	22/11/07
D Mellor	o	o	o	-	-	-	-	-	-	-	-	-
P O'Hara	-	-	-	o	o	o	o	o	o	o	o	o
D Bayvel	o	x	x	o	x	-	-	-	-	-	-	-
P Burrows	-	-	-	-	-	-	-	-	-	-	-	o
H Collier	-	-	-	-	-	-	-	-	o	o	o	o
P Cowan	-	-	-	-	-	x	o	o	o	x	o	x
S Dobbinson	o	o	o	o	x	o	o	o	o	o	o	o
W Hoadley	o	o	x	-	-	-	-	-	-	-	-	-
J Martin	-	-	-	o	o	o	o	o	x	o	o	o
P Mason	o	o	o	o	o	o	o	o	-	-	-	-
E McAtamney	-	-	-	-	-	-	-	-	x	x	-	-
M Mountier	o	o	o	o	o	o	o	o	-	-	-	-
M Mullins	o	o	o	o	x	o	x	x	-	-	-	-
D Nicolson	-	-	-	-	-	-	-	-	-	-	-	o
C O'Connor	o	o	x	o	o	-	-	-	-	-	-	-
C Pedersen	o	o	o	x	x	x	o	o	x	o	o	-
R Poland	-	-	-	-	-	-	-	-	-	-	-	o
J Prattley	-	-	-	-	-	-	-	-	o	o	o	o
W Ricketts	-	-	-	-	-	-	-	-	x	x	-	-
B Ross	x	o	o	o	o	o	o	o	o	o	o	x
G Verkerk	o	o	o	o	o	o	o	o	o	o	o	o

o Present x Absent - Not applicable

6.6.2 NAWAC Guidelines

NAWAC has, from time to time, prepared guidelines to assist in its activities. These outline the approach NAWAC takes, and provide guidance for members working through complex and contentious issues. See Appendix 2 for a full list of completed NAWAC Guidelines.

6.6.3 Annual reports

An annual report detailing NAWAC's activities is published each year (see Appendix 2).

Copies may be obtained from:

The Secretary
National Animal Welfare Advisory Committee
PO Box 2526
WELLINGTON 6140

The annual report is also available on the internet at <http://www.biosecurity.govt.nz/animal-welfare/nawac/>.

Functions

The functions of NAWAC, as set out in the Animal Welfare Act, are to:

- advise the Minister of Agriculture on any matter relating to the welfare of animals in New Zealand, including areas of research and legislative proposals relating to animal welfare;
- make recommendations relating to manipulations and surgical procedures;
- advise on the prohibition, restriction or conditions that should be attached to the sale or use of traps or devices;
- recommend the issue, amendment, suspension, revocation and review of codes of welfare; and
- promote the development of guidelines for the use of traps and devices, and for the hunting and killing of animals in a wild state.

8 Communications

8.1 NAWAC News

NAWAC News was published once in 2007.

8.2 Conferences

NAWAC members and members of NAWAC's secretariat attended the following conferences in 2007:

- Nature Conservancy Asia-Pacific Region Planning Meeting, Te Anau, January;
- RSPCA Australia Scientific Seminar, Canberra, February;
- NAWEM Stakeholder Briefing and Discussion, Wellington, April;
- Bioethics Council Workshop "Deepening Democracy: New Initiatives in Public Participation", Wellington, May;
- Royal New Zealand SPCA Annual Conference, Wellington, May;
- Office International des Epizooties (OIE) General Session, France, May;
- World Pork Expo / Animal Welfare Conference, Des Moines, Iowa, June;
- Dairy Cattle Veterinarians Society of NZVA conference, Christchurch, July;
- IUCN (The World Conservation Union) Oceania Region Workshop, Wellington, July;
- Australian and New Zealand Council for the Care of Animals in Research and Teaching Conference, Melbourne, July;
- New Zealand Veterinary Association Conference, Christchurch, July;
- Managing Invasive Vertebrate Species Conference, USDA/APHIS/WS National Wildlife Research Center, Ft Collins, Colorado, August;
- Sixth World Congress on Alternatives and Animal Use in the Life Sciences, Japan, August;
- Animal Law in Australasia: A New Dialogue, Brisbane, August;
- International Fertility Control for Wildlife Management Conference, CSL, York, September;
- New Zealand Companion Animal Council Conference, Queenstown, September;
- European Vertebrate Pest Conference, Reading, September;
- Rural Butchers Conference, Wellington, September;
- OIE Regional Commission for Asia, the Far East and Oceania Conference, Queenstown, November; and
- Australasian Pig Science Association Conference, Brisbane, November.

8.3 Liaison with other bodies

8.3.1 National Animal Ethics Advisory Committee

NAEAC deals with ethical and animal welfare issues with regard to research, testing and teaching involving animals. NAWAC continues to maintain a close association with NAEAC, ensuring familiarity with the activities of the two committees (the Chairperson of NAEAC is an ex officio member of NAWAC).

8.3.2 Agricultural Compounds and Veterinary Medicines Advisory Council

The Agricultural Compounds and Veterinary Medicines Advisory Council (AVMAC) provides comprehensive and balanced advice to MAF on matters relating to the regulatory control of agricultural compounds and veterinary medicines. Dr Roger Poland is the NAWAC representative on AVMAC. Liaison with NAWAC assists AVMAC to assess the impact of agricultural compounds and veterinary medicines on animal welfare.

8.3.3 Others

Throughout the year one or more NAWAC members, or officers of MAF Animal Welfare Directorate acting on behalf of NAWAC, also liaised with a wide network of organisations, including government departments, NGOs, producer boards, private researchers and companies, to ensure that NAWAC had available up-to-date information to enhance its decision making.

Strategic and Operational Plans

A revised strategic plan for 2007-2011, developed as a result of the Committee's strategic planning session in November 2006, was adopted in February 2007 and updated in February 2008.

NAWAC continues to develop strategies to raise the profile of animal welfare, and codes of welfare, with a view to publicising the development of draft codes and ensuring their acceptance. Aligned with this is a specific communications strategy incorporating stakeholder feedback on the most effective means of communication.

Most items on the operational plan for 2007 were accomplished, with outstanding items transferred to the 2008 operational plan.

See also the Chairman's Comment in this report regarding welfare indicators and welfare quality assurance.

Appendix 1 – Published Codes

Publication year

CODES OF WELFARE

Broiler Chickens: Fully Housed	2003
Rodeos	2003
Pigs	2005
Layer Hens	2005
Zoos	2005
Circuses	2005
Painful Husbandry Procedures	2005
Companion Cats	2007
Deer	2007

CODES OF RECOMMENDATIONS AND MINIMUM STANDARDS

Sea Transport of Sheep from New Zealand	1991
Welfare of Dairy Cattle	1992
Welfare of Deer During the Removal of Antlers <i>plus amendments 1994, 1997</i>	1992
Welfare of Horses	1993
Care of Animals in Boarding Establishments	1993
Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises	1994
Sale of Companion Animals	1994
Welfare of Animals Transported within New Zealand <i>plus amendments 1996, 1998</i>	1994
Welfare of Animals at Slaughterhouses	1995
Welfare of Sheep	1996
Emergency Slaughter of Farm Livestock	1996
Welfare of Bobby Calves	1997
Welfare of Dogs	1998
Welfare of Ostrich and Emu	1998

Appendix 2 – Other Publications

Publication year

GUIDELINES

Welfare of Livestock from which Blood is Harvested for Commercial and Research Purposes	April 1996
Welfare of Yearling Fallow Deer During the Use of Rubber Rings to Prevent Antler/Pedicle Growth	September 1997
Welfare of Red and Wapiti Yearling Stags During the Use of Rubber Rings to Induce Analgesia for the Removal of Spiker Velvet	September 1998

MAF POLICY GUIDES TO THE ANIMAL WELFARE ACT

Guide to the Animal Welfare Act 1999	December 1999
The Use of Animals in Research, Testing and Teaching – Users Guide to Part 6 of the Animal Welfare Act 1999	May 2000
Guidelines for Drafting Codes of Welfare	May 2001

MAF POLICY GUIDES TO THE ANIMAL WELFARE ACT

No.	Title	
1	Approach to consideration of draft codes of welfare	October 2004
2	Dealing with practices which might be inconsistent with the spirit of the Animal Welfare Act	October 2004
3	Setting minimum standards where section 73(3) applies	October 2004
4	Process for the development of codes of welfare	November 2006
5	Role of science in setting animal welfare standards	October 2004
6	Wider issues relevant to setting minimum standards	November 2004
7	Taking account of societal expectations, technical viewpoints and public opinion	December 2004
8	Justifying animal welfare trade-offs	December 2004
9	Assessing the welfare performance of restraining and kill traps	June 2005
10	Phasing out one animal management system in favour of another	September 2005
11	Principles of consultation	February 2006

NAWAC DISCUSSION DOCUMENT

Animal Welfare Standards to Apply when Animals are Slaughtered in Accordance with Religious Requirements	April 2001
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ANNUAL REPORTS

1990 Annual Report
1991 and 1992 Annual Report
1993 Annual Report
1994 Annual Report
1995 Annual Report
1996 Annual Report
1997 Annual Report
1998 Annual Report
1999 Annual Report
2000 Annual Report
2001 Annual Report
2002 Annual Report
2003 Annual Report
2004 Annual Report
2005 Annual Report
2006 Annual Report

AWAC NEWS / NAWAC NEWS

Issue 1 – December 1997
Issue 2 – December 1998
Issue 3 – July 2000
Issue 4 – May 2001
Issue 5 – February 2002
Issue 6 – November 2002
Issue 7 – August 2003
Issue 8 – December 2004
Issue 9 – May 2006
Issue 10 – November 2007

Appendix 3 – MAF funded Animal Welfare Operational Research 1993-2007

Year	Institution / Research leader	Topic	Report title / Publication reference
1993/94	Massey University Prof D J Mellor	Castration of lambs – identification of most suitable method by comparing castration techniques	A S Dinniss, D J Mellor, K J Stafford, R A Bruce & R N Ward, <i>Acute Cortisol Responses of Lambs to Castration Using a Rubber Ring and/or a Castration Clamp with or without Local Anaesthetic</i> , New Zealand Veterinary Journal, Vol 45(3), 1997 A S Dinniss, K J Stafford, D J Mellor, R A Bruce & R N Ward, <i>The Behaviour Pattern of Lambs after Castration Using a Rubber Ring and/or a Castration Clamp with or without Local Anaesthetic</i> , New Zealand Veterinary Journal, Vol 47(6), 1999
1993/94	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Survey of attitudes towards and awareness of animal welfare issues in four sectors: • veterinarians and livestock officers • farmers and industry leaders • members of animal welfare groups • general public	L R Matthews, A Loveridge, B Guerin, <i>Animal Welfare Issues and Attitudes in New Zealand</i> , ABWRC, 1994
1993/94	NZ Pastoral Agriculture Research Institute Ltd Dr G Waghorn	Live sheep exports – pens, rails and troughs	G C Waghorn, G B Davis & M J Harcombe, <i>Specification of Pen Rail Spacing and Trough Heights to Prevent Escape and Enable Good Access to Feed by Sheep During Sea Shipments from New Zealand</i> , New Zealand Veterinary Journal, Vol 43(6), 1995
1994/95	Massey University Prof D J Mellor	Disbudding/dehorning	C M McMeekan, D J Mellor, K J Stafford, R A Bruce, R N Ward & N G Gregory, <i>Effects of Shallow Scoop and Deep Scoop Dehorning on Plasma Cortisol Concentrations in Calves</i> , New Zealand Veterinary Journal, Vol 45(2), 1997 McMeekan et al, <i>Effects of Local Anaesthesia of 4 or 8 Hours Duration on the Acute Cortisol Response to Scoop Dehorning in Calves</i> , Australian Veterinary Journal, Vol 76, 1998 McMeekan et al, <i>Effects of Regional Anaesthesia and/or a Non-Steroidal Anti-inflammatory Analgesic on the Acute Cortisol Response to Dehorning in Calves</i> , Research in Veterinary Science, Vol 64, 1998
1994/95	Massey University Prof D Mellor	Castration of lambs – clarification of findings at variance with study in Edinburgh	D J Mellor & K J Stafford, <i>Interpretation of Cortisol Responses in Calf Disbudding Studies</i> , New Zealand Veterinary Journal, Vol 45(3), 1997 A S Dinniss, K J Stafford, D J Mellor, R A Bruce & R N Ward, <i>Acute Cortisol Responses of Lambs Castrated & Docked Using Rubber Rings with or without a Castration Clamp</i> , Australian Veterinary Journal, Vol 75(7), July 1997

Year	Institution / Research leader	Topic	Report title / Publication reference
1994/95	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Effects of tail docking dairy cattle	L R Matthews, A Phipps, G A Verkerk, D Hart, J N Crockford, J F Carragher & R G Harcourt, <i>The Effects of Taildocking and Trimming on Milker Comfort and Dairy Cattle Health, Welfare, Production</i> , August 1995
1995/96	Massey University Prof D J Mellor & Prof N G Gregory	Nutritional constraints on the humane handling and transport of full-term and induced bobby calves	D J Mellor & N G Gregory, <i>Nutritional Constraints on the Humane Handling and Transport of Full-term and Induced Bobby Calves</i> , July 1998 S E Todd, D J Mellor, K J Stafford, N G Gregory, R A Bruce & R N Ward, <i>Effects of Food Withdrawal and Transport on 5 to 10-day-old Calves, Research in Veterinary Science</i> , Vol 68(2), April 2000 S E Todd, D J Mellor, K J Stafford, N G Gregory, R A Bruce & R N Ward, <i>Short-term Physiological Effects of Refeeding 1-2 Week Old Calves after Fasting and Transport, Proceedings of the New Zealand Society for Animal Production</i> , 60, 230-233, 2000
1995/96	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Tail docking of cattle – the implications for cattle welfare and the adoption of alternative practices	A Loveridge, C Bagshaw & L Matthews, <i>Taildocking of Cattle: Adoption of Alternative Practices, Contract Research Report</i> , July 1996
1995/96	Massey University & Animal Behaviour and Welfare Research Centre Prof N G Gregory & Dr L R Matthews	Tail docking in dairy cows – literature review	N G Gregory & L R Matthews, <i>Tail Docking of Dairy Cattle</i>
1996/97	Massey University Prof D J Mellor & Prof N G Gregory	Controlling inflammatory pain felt by calves after dehorning	D J Mellor, K J Stafford, N G Gregory, M A Sutherland, R A Bruce & R N Ward, <i>Controlling Inflammatory Pain After Amputation Dehorning in Calves</i> , July 1999 M A Sutherland, D J Mellor, K J Stafford, N G Gregory, R A Bruce & R N Ward, <i>Modification of Cortisol Responses to Dehorning in Calves Using a 5-hour Local Anaesthetic Regimen plus Phenylbutazone, Ketoprofen or Adrenocorticotrophic Hormone Injected prior to Dehorning, Research in Veterinary Science</i> , Vol 73, 2002 K J Stafford, D J Mellor, S E Todd, R N Ward & C M McMeekan, <i>The Effect of Different Combinations of Lignocaine, Ketoprofen, Xylazine, Tolazoline on the Acute Cortisol Response to Dehorning in Calves</i> , <i>New Zealand Veterinary Journal</i> , Vol 51(5), 2003

Year	Institution / Research leader	Topic	Report title / Publication reference
1996/97	Massey University Prof D J Mellor & Prof N G Gregory	Reducing ring castration distress in lambs with a castrating clamp (burdizzo)	M A Sutherland, K J Stafford, D J Mellor, N G Gregory, R A Bruce & R N Ward, <i>Acute Cortisol Responses and Wound Healing in Lambs After Ring Castration Plus Docking With or Without Application of a Castration Clamp</i> , <i>Australian Veterinary Journal</i> , Vol 78(6), June 2000
1996/97	Massey University Prof N G Gregory	Aetiology and prevention strategies for nutritional diarrhoea in sheep and cattle	N G Gregory, <i>Causes & Consequences of Diarrhoea in Cattle and Sheep Grazing Spring Pasture – A Review</i>
1996/97	Massey University Prof N G Gregory	Review of international research on alternative egg production systems	K E Littin & N G Gregory, <i>A Review of the International Research on Alternative Methods of Egg Production</i>
1996/97	NZ Pastoral Agriculture Research Institute Ltd Dr M W Fisher	Lambing management systems	M W Fisher, <i>Welfare Implications of Easycare Lambing</i> , June 1997 M W Fisher & D J Mellor, <i>The Welfare Implications of Shepherding during Lambing in Extensive New Zealand Farming Systems</i> , <i>Animal Welfare</i> , Vol 11(2), 2002 M W Fisher, <i>New Zealand Farmer Narratives of the Benefits of Reduced Human Intervention during Lambing in Extensive Farming Systems</i> , <i>Journal of Agricultural and Environmental Ethics</i> , Vol 16, 77-90, 2003
1996/97	NZ Pastoral Agriculture Research Institute Ltd Dr J C Pollard	Strategy to meet welfare needs in relation to shade and shelter on sheep farms and dissemination to farmers	J C Pollard, <i>Strategy to Meet Welfare Needs in Relation to Shade and Shelter</i> , July 1997
1996/97	MAF Quality Management Mr C Taylor	Survey of prevalence and practice of mulesing	C Taylor, <i>Mulesing of Sheep in New Zealand</i> , July 1997
1996/97	MAF Quality Management Dr P V Pearce	Long haul animal transport	P V Pearce, <i>Determination of some Key Preconditioning Factors in the Long Haul Journeys of Cattle</i> , September 1997 P V Pearce, <i>Effects of Long Distance Travel on Dairy Cows</i> , <i>Surveillance</i> , Vol 25(3), 1998 A D Fisher, P V Pearce & L R Matthews, <i>The Effects of Long Haul Transport on Pregnant, Non-lactating Dairy Cows</i> , <i>New Zealand Veterinary Journal</i> , Vol 47(5), 1999 A D Fisher & C S Bagshaw, <i>Use of Equipment & Oral Medicinals on Livestock: Requirement for Welfare Guidelines</i> , <i>Contract Research Report</i> , 1997

Year	Institution / Research leader	Topic	Report title / Publication reference
1997/98	Massey University Prof N G Gregory	Body condition scoring in hens	N G Gregory & J K Robins, <i>A Body Condition Scoring System for Layer Hens</i> , <i>New Zealand Journal of Agricultural Research</i> , Vol 41, 555-559, 1998
1997/98	Massey University Prof N G Gregory	Animal welfare in the fish and crustacean industry	N G Gregory & J S Lumsden, <i>Animal Welfare in the Fish and Crustacean Industry</i> , October 1998
1997/98	Massey University Prof E C Firth & Mr N R Perkins	Interpretative literature review on equine distal limb neurectomy	E C Firth, N R Perkins & B H Anderson, <i>Equine Distal Limb Neurectomy – Interpretative Literature Review</i> , March 1998
1997/98	Massey University Dr K J Stafford	Productivity, health and welfare of cows on biodynamic/organic farms	K J Stafford, <i>Mastitis: A Problem on Biodynamic or Organic Farms</i> , June 1998
1997/98	Agriculture New Zealand & Massey University Mr J Ripley & Mr D V Thomas	Economic analysis of egg production	J Ripley & D V Thomas, <i>A Case Study of Egg Production Costs and Income</i> , May 1998
1997/98	Massey University Prof D J Mellor	Additional indices of distress in lambs and calves	D J Mellor & K J Stafford, <i>Increasing Indices of Distress in Lambs and Calves</i> , April 2000 D J Mellor, K J Stafford, S E Todd, T E Lowe, N G Gregory, R A Bruce & R N Ward, <i>A Comparison of Catecholamine and Cortisol Responses of Young Lambs and Calves to Painful Husbandry Procedures</i> , <i>Australian Veterinary Journal</i> , Vol 80(4), 2002
1997/98	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Improving farmer techniques for the induction of analgesia prior to velvet removal	C J Morrow & L R Matthews, <i>Determining Best Practice for Inducing Analgesia in Red Deer Prior to Velvetting by Non-Veterinarian Operators</i> , June 1998
1997/98	Massey University Prof N G Gregory	Practical guidelines for inspecting the effectiveness of stunning and slaughter in red meat slaughterhouses	N G Gregory, <i>Guidelines for Humane Stunning and Slaughter at Slaughter Premises</i> , August 1998
1997/98	Massey University Prof N G Gregory	Welfare aspects of stock unloading	K G Johnson & N G Gregory, <i>Welfare Aspects of Stock Unloading</i> , April 1998
1997/98	Massey University Prof N G Gregory	Dairy cattle body condition scoring	N G Gregory, J K Robins, D G Thomas & R W Purchas, <i>Relationship Between Body Condition Score and Body Composition in Dairy Cows</i> , <i>New Zealand Journal of Agricultural Research</i> , Vol 41, 527-532, 1998

Year	Institution / Research leader	Topic	Report title / Publication reference
1997/98	Massey University Prof D J Mellor	Anaesthesia for alleviating lamb castration distress	M A Sutherland, D J Mellor, K J Stafford, N G Gregory, R A Bruce, R N Ward & S E Todd, <i>Acute Cortisol Responses of Lambs to Ring Castration and Docking After Injection of Lignocaine into the Scrotal Neck or Testes at the Time of Ring Application</i> , <i>Australian Veterinary Journal</i> , Vol 77, 738-741, 1999
1997/98	NZ Pastoral Agriculture Research Institute Ltd Dr J C Pollard	Analgesia for lamb castration	J C Pollard, <i>Behavioural Effects of an Oral Dose of Acetyl Salicylate at Docking in Lambs</i> , April 1998
1997/98	Massey University Prof D J Mellor	Methods used to castrate calves in New Zealand	K J Stafford & D J Mellor, <i>A Survey of NZ Beef Farmers to Ascertain the Methods Used to Castrate Calves</i> , May 1999 K J Stafford, D J Mellor & C M McMeekan, <i>A Survey of the Methods Used by Farmers to Castrate Calves in New Zealand</i> , <i>New Zealand Veterinary Journal</i> , Vol 48(1), 2000
1998/99	Massey University Prof D J Mellor	Ante-mortem assessment of bobby calf welfare	K J Stafford, D J Mellor & S E Todd, <i>Ante-mortem Assessment of Bobby Calves</i> , January 2000 K J Stafford, D J Mellor & S E Todd, <i>Bobby Calf Welfare</i> , <i>Surveillance</i> , Vol 27(4), 2000 K J Stafford, D J Mellor, S E Todd, N G Gregory, R A Bruce & R N Ward, <i>The Physical State and Plasma Biochemical Profile of Young Calves on Arrival at a Slaughter Plant</i> , <i>New Zealand Veterinary Journal</i> , Vol 49(4), 2001
1998/99	Massey University Prof P R Wilson	Evaluation of the most effective use of local anaesthesia for the provision of analgesia to the velvet antler of stags	P R Wilson, K J Stafford, D J Mellor & D G Thomas, <i>Investigation of Routes and Doses of Local Anaesthetic Administration to Produce Analgesia of the Velvet Antler of Stags</i> , March 1999 P R Wilson, D G Thomas, K J Stafford & D J Mellor, <i>Routes and Doses of Lignocaine Hydrochloride for Analgesia of the Velvet Antler of Stags</i> , <i>New Zealand Veterinary Journal</i> , Vol 47(5), 1999 P R Wilson, K J Stafford, D G Thomas & D J Mellor, <i>Evaluation of Techniques for Lignocaine Hydrochloride Analgesia of the Velvet Antler of Adult Stags</i> , <i>New Zealand Veterinary Journal</i> , Vol 48(6), 2000
1998/99	MIRINZ Food Technology and Research Ltd Dr N G Gregory	Literature review – tail docking dogs	N G Gregory, <i>Tail Docking in Dogs – An Interpretative Review of the Literature from 1992 to 1998</i> , February 1999

Year	Institution / Research leader	Topic	Report title / Publication reference
1998/99	Massey University Prof D J Mellor	Review of literature – castration/tailing distress in lambs and calves	D J Mellor, <i>A Review of Acute Castration and Tailing Distress and Its Alleviation in Lambs and Calves</i> , July 1999 D J Mellor & K J Stafford, <i>Acute Castration and/or Tailing Distress and Its Alleviation in Lambs</i> , <i>New Zealand Veterinary Journal</i> , Vol 48(2), 2000
1998/99	MIRINZ Food Technology and Research Ltd Dr N G Gregory	Humane crayfish slaughter methods	N G Gregory, <i>Survey of Methods Used for Killing Rock Lobsters in New Zealand</i> , June 1999 T E Lowe & N G Gregory, <i>A Humane End for Lobsters</i> , <i>New Zealand Science Monthly</i> , September 1999
1998/99	MIRINZ Food Technology and Research Ltd Dr N G Gregory	Forced moulting of hens	N G Gregory, <i>Moulting Layer Hens – An Interpretative Review</i> , May 1999
1998/99	MIRINZ Food Technology and Research Ltd Dr N G Gregory	Hen body condition scoring	N G Gregory & C D Devine, <i>Body Condition Score in End of Lay Hens: Some Implications</i> , March 1999 N G Gregory & C D Devine, <i>Body Condition in End-of-lay Hens: Some Implications</i> , <i>Veterinary Record</i> , 145:49, 1999
1999/2000 2000/01	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Monitoring conditions on stock trucks	L R Matthews, J Tacon & J Jago, <i>The Effect of Environmental Conditions on the Welfare of Livestock: Literature Review and Preliminary Research</i> , October 2000 A D Fisher, M Stewart, J Tacon & L R Matthews, <i>Improving Conditions and Welfare on Stock Trucks</i> , June 2001 A D Fisher, M Stewart, J Tacon & L R Matthews, <i>The Effects of Stock Crate Design and Stocking Density on Environmental Conditions for Lambs on Road Transport Vehicles</i> , <i>New Zealand Veterinary Journal</i> , Vol 50(4), August 2002
1999/2000	Animal Behaviour and Welfare Research Centre Dr L R Matthews	Near infrared spectrometry of faecal and blood samples for indicators of animal stress	C J Morrow, D C Corson, A D Fisher, J Lee & L R Matthews, <i>Near Infrared Spectrometry of Faecal and Blood Samples for Indicators of Animal Stress</i> , August 2000

Year	Institution / Research leader	Topic	Report title / Publication reference
1999/2000	NZ Pastoral Agriculture Research Institute Ltd Dr N G Gregory	Nose ringing sows	L H Jacobson, N G Gregory, B K Atkins & D M Livesey, <i>Nose Ringing Sows</i> , November 2000
1999/2000	Massey University Prof D J Mellor	Assessment of calf castration methods	K J Stafford, D J Mellor & S E Todd, <i>Assessment of Calf Castration Distress (Strategies for Alleviating the Acute Pain and Distress Associated with Castration in Cattle)</i> , March 2001 K J Stafford, D J Mellor, S E Todd, R A Bruce & R N Ward, <i>Effects of Local Anaesthesia or Local Anaesthesia Plus a Nonsteroidal Anti-inflammatory Drug on Cortisol Responses of Calves to Castration by Five Different Methods</i> , <i>Research in Veterinary Science</i> , Vol 73, 2002 K J Stafford & D J Mellor, <i>The Welfare Significance of the Castration of Cattle: A Review</i> , <i>New Zealand Veterinary Journal</i> , Vol 53, 2005
1999/2000	NZ Pastoral Agriculture Research Institute Ltd Dr M W Fisher	Out-of-season extension production of lambs	M W Fisher, <i>The Animal Welfare Implications of Out-of-season Extensive Lamb Production Systems</i> , June 2000 M W Fisher, <i>A Review of the Welfare Implications of Out-of-season Extensive Lamb Production Systems in New Zealand</i> , <i>Livestock Production Science</i> , Vol 85, 165-172, 2004
1999/2000	Massey University Prof D J Mellor	Literature review on dehorning/disbudding	K J Stafford & D J Mellor, <i>Disbudding and Dehorning Distress in Cattle and its Alleviation – A Review of the Literature</i> , June 2000
1999/2000	Massey University Dr K J Stafford	Pathobiology or organic dairy farming	K J Stafford & D J Mellor, <i>Animal Welfare on Organic Dairy Farms in New Zealand – A Review of the Literature</i> , June 2000
1999/2000	Westpac Trust Agricultural Research Station Mr B Attrill	Optimum herd size for wintering dairy cows	C G Roach, <i>Optimum Herd Size for Wintering Dairy Cows</i> , August 2002
1999/2000	South Australian Research and Development Institute	Killing induced calves by concussion	N G Gregory, <i>Report for MAF on Observations on the Humane Aspects of Killing Induced Calves by Concussion</i> , July 2000
2000/01	NZ Pastoral Agriculture Research Institute Ltd Dr A R Bray	Short scrotum castration of lambs	A R Bray, I Tarbotton & M Fisher, <i>Short Scrotum Castration of Lambs</i> , May 2001

Year	Institution / Research leader	Topic	Report title / Publication reference
2000/01	NZ Pastoral Agriculture Research Institute Ltd Dr M W Fisher	Welfare implications of intensive grazing systems for beef production	M W Fisher, C A Moffat, N B Smith, P D Muir, M G Lambert, R W Webby & L R Matthews, <i>The Welfare Implications of Intensive Grazing Systems for Beef Production</i> , June 2001
2000/01	South Australian Research and Development Institute Dr N G Gregory	Electronic current profiles during livestock stunning	N G Gregory, <i>Current Profiles during Electrical Stunning</i> , March 2001
2000/01	Massey University Prof D J Mellor	Pig free-range management systems	N G Gregory, <i>Profiles of Currents during Electrical Stunning</i> , <i>Australian Veterinary Journal</i> , Vol 79(12), 2001
2000/01	Massey University Prof D J Mellor	Chronic pain in calves	K J Stafford, D J Mellor & M Johnson, <i>Pig Health and Welfare in Non-intensive Systems</i> , September 2001
2000/01	Massey University Prof D J Mellor	Alleviation of dehorning distress in calves	K J Stafford & D J Mellor, <i>Chronic Pain in Calves</i> , August 2002
2000/01	Massey University Prof D J Mellor	Alleviation of dehorning distress in calves	D J Mellor & K J Stafford, <i>Alleviation of Calf Dehorning Distress: Further Strategies for Alleviating the Acute Pain and Distress Associated with Dehorning in Calves</i> , April 2002
2000/01	Massey University Prof D J Mellor	Alleviation of dehorning distress in calves	K J Stafford, D J Mellor, S E Todd, R N Ward & C M McMeekan, <i>The Effects of Different Combinations of Lignocaine, Ketoprofen, Xylazine and Tolazoline on the Acute Cortisol Response to Dehorning in Calves</i> , <i>New Zealand Veterinary Journal</i> , Vol 51(5), 2003
2000/01	Corporate Logistics Ltd Mr R J Davies	Transporting ostrich and emu – issues and recommendations	K J Stafford & D J Mellor, <i>Dehorning and Disbudding Distress and its Alleviation in Calves</i> , <i>The Veterinary Journal</i> , 169, 337-349, 2005
2000/01	Corporate Logistics Ltd Mr R J Davies	Transporting ostrich and emu – issues and recommendations	Corporate Logistics Ltd (R Davies), <i>Ratite Transportation in New Zealand – An Assessment of Practices and Implications for Welfare</i> , June 2001
2000/01	Massey University Prof P R Wilson	Velvet antler removal from stags – evaluation of post-operative pain	C Crowther, R Davies & W Glass, <i>The Effect of Night Transportation on the Heart Rate and Skin Temperature of Ostriches during Real Transportation</i> , <i>Meat Science</i> , Vol 64, 365-370, 2003
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