ANIMAL WELFARE (COMMERCIAL SLAUGHTER) CODE OF WELFARE REPORT

Introduction

1. The draft Animal Welfare (Commercial Slaughter) Code of Welfare (the Code) has been developed by the National Animal Welfare Advisory Committee (NAWAC), pursuant to the Animal Welfare Act 1999 (the Act). This report accompanies the Code recommended by NAWAC to the Minister, as required by section 74 of the Act.

   The report notes:

   - the reasons for NAWAC's recommendations;
   - the nature of any significant differences of opinion about the Code, or any provision of it, that have been shown by the submissions; and
   - the nature of any significant differences of opinion about the Code, or any provision of it, that have occurred within NAWAC.

   In providing this report, NAWAC notes that it fully considered all submissions it received and reviewed relevant scientific literature, and that there was debate among NAWAC members on many points. This report is not required to, and does not attempt to, show every detail of the analysis and discussions that took place.

2. There are a number of minimum standards where the animal welfare implications are self-evident and require no explanation for their inclusion. NAWAC has decided that it will not provide comment on these minimum standards or recommended best practices, but will provide explanations on minimum standards which it believes are complex or controversial or on which it received submissions with significant differences of opinion. Minimum standards as drafted may have been amended for a number of reasons, including to make them legally robust, to ensure a more effective coverage of the issue, or to change from a recommended best practice to a minimum standard (or vice versa).

3. It should be noted that the Act does not define "significant differences". While there were a variety of opinions expressed in the submissions, NAWAC did not consider that all differences necessarily represented significant differences of opinion. NAWAC has taken the view that significant differences are either where there are large numbers of submissions which are contrary to a minimum standard in the Code, or where a submission puts forward a justification based on scientific evidence or good practice for a different or alternative minimum standard. NAWAC notes that some individuals or organisations may interpret "significant differences" in a way that varies from the NAWAC view.

4. The Code applies to all persons responsible for the welfare of animals being commercially slaughtered, except where their killing is excluded under the Act. Commercial slaughter has been defined for the purposes of the Code as the "killing of animals to produce animal products where a business transaction takes place" and does not include the slaughter by farmers of their own animals or slaughter of animals for other purposes. For the purposes of the Code, animals are divided into four categories:
   - large mammals, including cattle, sheep, goats, pigs, deer, equines and camelids;
   - small mammals, including rabbits, hares, wallabies, mustelids and possums;
   - birds, including poultry, ostriches and emus; and
   - aquatic species, including farmed and wild-captured finfish (including eels), and crabs, rock lobsters (crayfish) and freshwater crayfish (koura).
5. The following Regulations and Circular were deemed by the Act to be the Animal Welfare (Commercial Slaughter) Code of Welfare 2002:
   - Clauses 1(a) and 2, and the heading preceding clause 2, of Part 7 of Schedule 1 to the Fish Export Processing Regulations 1995 (SR 1995/54);
   - Regulation 80(1) of the Game Regulations 1975 (SR 1975/174);
   - Regulation 76 of the Meat Regulations 1969 (SR 1969/192);
   - The Slaughter of Stock, Game, and Poultry Regulations 1969 (SR 1969/194); and
   - New Zealand Fishing Industry Agreed Implementation Standards 003.4 Live Eels and Rock Lobsters Circular 1995.

   The Minister may revoke the Animal Welfare (Commercial Slaughter) Code of Welfare 2002 when the Animal Welfare (Commercial Slaughter) Code of Welfare that is the subject of this report is issued.

Code preparation and public submissions

6. The Act allows for any individual or organisation to draft a code of welfare. The Code was drafted by a writing group convened by NAWAC. In addition, as required by the Act, representatives of those likely to be affected by the Code were consulted during its preparation and before public notification.
7. NAWAC considered the Code to ensure that it complied with the purposes of the Act, that it was written clearly so as to be readily understood, and that representatives of those likely to be affected by it had been consulted. NAWAC wishes to point out that, at that time, NAWAC decided not to make any final decisions on the Code until it had received submissions. The Code is required to be publicly consulted, and for NAWAC to come to any conclusion prior to this consultation would have meant that NAWAC was not following due process by acting in a biased and predetermined manner.

8. The Code was publicly notified on 11 November 2002 (the 2002 draft Code) by notices in the major newspapers in Auckland, Wellington, Christchurch and Dunedin. In addition, it was sent to all major libraries and to specific interested groups. The closing date for submissions was 20 December 2002.

9. A total of 19 submissions were received during the public consultation period, and seven further submissions were received after that date. A number of oral submissions were also heard.

10. All submissions were carefully considered by a subcommittee appointed by NAWAC to review the Code. The subcommittee reviewed the Code during the period 2003 to 2005 and made substantial changes, including the reorganisation of the contents. NAWAC then decided that, due to the number of significant changes that had been made to the original public draft of the Code, the Code should be publicly notified for a second time.

11. The revised Code was publicly notified on 12 January 2006 (the 2006 draft Code) by notices in the major newspapers in Auckland, Wellington, Christchurch and Dunedin. In addition, it was sent to all major libraries and to specific interested groups. The closing date for submissions was 27 February 2006.

12. A total of 18 submissions were received during the public consultation period. All submissions were read in their entirety and taken into account. A summary of the submissions received on the 2006 draft Code was prepared and NAWAC's responses to the submissions were noted.

13. Following consideration of the 2006 draft Code and the public submissions received on it, NAWAC released a further revised version of the Code (the 2006 revised draft Code), from 21 November 2006 until 19 December 2006, for comment. This was sent to a selected group of key stakeholders. A total of 22 submissions were received during this second-round submission process. While a number of specific points were raised in these submissions for NAWAC's consideration, the submissions generally were supportive of the changes made to the Code by NAWAC following consideration of the public submissions. A summary of the second-round submissions received was prepared and NAWAC's responses to the submissions were noted.

14. NAWAC appointed a subcommittee of eight members to review the 2006 draft Code in detail and all the submissions received on it. The subcommittee met for one full day in each of May, June and July of 2006, and April 2007. Throughout the period the Code was under review, subcommittee members worked in collaboration by email, and in consultation with MAF Animal Welfare Group support staff. MAF Animal Welfare Group support staff liaised with various groups likely to be affected by the Code. All members of the subcommittee had experience of witnessing slaughter in one form or another, and collectively had experience of visiting slaughter premises and witnessing most forms of slaughter covered under the Code. The subcommittee reported the Code back to NAWAC on 15 and 16 May 2007 for final consideration

and approval for recommendation to the Minister. The Code was subsequently peer reviewed by international humane slaughter expert Professor Neville Gregory of the Royal Veterinary College, University of London.

Key issues

15. The Code has undergone a considerable gestation period, during which three drafts have been widely consulted on and many submissions reviewed and acted on. The following key issues represent the significant concerns raised from the public consultation on the 2006 draft Code and the second-round consultation conducted on the 2006 revised draft Code.

Scope of the Code

Should the Code cover on-farm slaughter by the farmer/employee? (page 5)

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Should selection/procurement of animals for slaughter be included in the Code? (page 6)

Pre-slaughter handling of large mammals

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Stunning and sticking of large mammals

Should homekill operators be required to stun sheep? (page 9)

Should controlled atmosphere stunning of large mammals be allowed? (page 11)

What should be the minimum duration of electrical stun and the minimum current levels to be applied? (page 12)

What should be the maximum duration between application of a reversible electrical stun and completion of the bleeding out process? (page 12)

How should the processing of foetuses be handled to ensure their welfare? (page 15)

Stunning of small mammals

Should controlled atmosphere stunning of small mammals be allowed? (page 16)

Stunning and bleed out of poultry

Should controlled atmosphere stunning of poultry be allowed? (page 16)

Should decapitation of poultry be allowed as a slaughter method? (page 17)

Should the Code require the cutting of both carotid arteries? (page 17)

Stunning and killing of aquatic species

Should the Code allow for the desliming of eels? (page 18)

Should the Code require the stunning of crustaceans before their killing in restaurants? (page 19)

Shechita slaughter

Should Shechita slaughter of cattle, sheep, goats and poultry be allowed? (page 20)

Homekill service providers

When does responsibility under the Act transfer from the owner or person in charge of the animal to the homekill operator? (page 23)

Which minimum standards apply to homekill operators? (page 24)

Quality assurance programme

Should quality assurance programmes be compulsory and, if so, who should be required to establish them? (page 24)

16. **Scope of the Code**

(a) ***Should the Code cover on-farm slaughter by the farmer/employee?***

For the purposes of the Code, "commercial slaughter" has been defined by NAWAC as involving the killing of animals to produce animal products *where a business transaction takes place*. NAWAC notes that the Code therefore does not apply to on-farm slaughter by a farmer or his/her employee where the carcass is for their own use. NAWAC intends developing a separate code dealing with on-farm and emergency slaughter to cover slaughter situations where a business transaction does not take place.

(b) ***Should the Code apply to homekill operators?***

Homekill service providers and pet food operators have been included within the scope of the Code from its inception. The New Zealand Rural Butchers Association, New Zealand Pet Food Manufacturers Association and New Zealand Federated Farmers have, however, argued that the homekill operator (i.e. the homekill service provider or pet food operator) should be exempt from the Code, and that a separate code should be developed to cover their activities.

The application of the Code to homekill operators was therefore the subject of considerable discussion within NAWAC. Consultation took place with the industry groups, with their argument for a separate code predicated on the lack of recognition of the unique circumstances of slaughtering animals *on a farm* by a code that, in the main, deals with animals killed at commercial slaughter premises. NAWAC has determined, however, that homekill operators should be included within the scope of the Code. NAWAC believes that it is appropriate to encompass all forms of commercial slaughter in the Code, and that the Code can satisfactorily accommodate

the requirements of homekill operators. NAWAC has addressed all but one issue raised by the industries through minor revisions to the Code. (The remaining unresolved issue concerns the requirement in the Code for sheep to be stunned before slaughter on the farm. This issue is addressed in section 18(a) of this report, "Should homekill operators be required to stun sheep?".)

(c) ***Should selection/procurement of animals for slaughter be included in the Code?***

A section covering selection of animals for slaughter was added to the Code following consideration of the 2002 draft Code and the submissions received on it. This section was subsequently modified and renamed as "Procurement of animals for slaughter" following consideration of the 2006 draft Code and the public submissions received on it.

When NAWAC considered the submissions received on 2006 revised draft Code, it became clear that submitters were unhappy with both the procurement of animals being covered within the scope of the Code and with of the content of the proposed section.

NAWAC continues to focus on, and be concerned with, the way codes fit together in terms of there being both logical and consistent boundaries between codes. After further consideration, NAWAC determined that species-specific codes should deal with the selection/procurement of animals for slaughter, the transport code with their transport to slaughter, and the commercial slaughter code with their actual slaughter from their time of arrival at the slaughter premises. Therefore, NAWAC has removed the section on procurement of animals from the Code, and will cover the issues relating to procurement in the various species-specific codes.

17. **Pre-slaughter handling of large mammals**

(a) ***How long can bobby calves be held before slaughter?***

NAWAC notes that the handling of bobby calves is a sensitive issue given their young age and consequent vulnerability. There was discussion as to the appropriate maximum time at which bobby calves must be killed following arrival at the slaughter premises, and whether they could be fed if it was desirable to hold them for longer than the maximum time. The issue for the slaughter premises is the contamination associated with bobby calf slaughter and the need to therefore schedule bobby calves for processing later in the day. (Calves are known to carry higher levels of verotoxigenic E. coli and other pathogenic enteric bacteria than, for example, sheep and lambs, which are processed on the same slaughter line. To avoid cross-contamination, slaughter premises routinely require bobby calves to be slaughtered after other species of stock.) Therefore, where bobby calves arrive at the premises at the end of the day, there will be a need to delay their slaughter to later the following day. The question then is how long can they reasonably be held before requiring to be slaughtered, and can they be fed and kept longer than this time?

The 2006 draft Code included the minimum standard that bobby calves must be scheduled for slaughter on the day of arrival at the premises or, in rare circumstances, the following morning. Strong submissions were received on this minimum standard from the industry requesting that the same-day requirement be dropped. NAWAC therefore proposed that:

- the dairy code provide that bobby calves to be transported to slaughter must have been fed at least half a day's ration of colostrum or milk not more than *two hours* before departure;
- the transport code provide that bobby calves must be transported for no longer than *eight hours* to slaughter premises; and
- the commercial slaughter code provide that bobby calves must be slaughtered within *20 hours* after arrival unless fed.

The minimum standard in the 2006 revised draft Code required that bobby calves be slaughtered within 20 hours of arrival at the premises. Submissions received on this draft ranged from the need to slaughter bobby calves without delay following their arrival at the premises, to an acceptance of the proposed maximum time limit but a request that there be an allowance for bobby calves to be fed and kept longer if required. In further discussion with industry groups the issue of only 8 hours transport was seen as unworkable. Although ideal, it was felt these time constraints were seen as unachievable in a number of cases. NAWAC has therefore recommended that bobby calves be slaughtered as soon as possible but within 28 hours of being loaded for transport. NAWAC's intent is not to increase the time in transit but allow for some increased flexibility in the partitioning of time in transit and lairage of the 30 hour requirement from time of last feed.

NAWAC notes that, with correct feeding regimes and transport protocols, welfare compromise in young healthy calves can be minimised when they are slaughtered within 30 hours of their last feed (Todd et al. 2000). NAWAC further saw no reason why slaughter premises should not be allowed to feed bobby calves if they wished to hold them for longer than the maximum time allowed to slaughter.

Hence, once this code and the dairy cattle code have been gazetted, the maximum allowable time from a bobby calf's last feed to its slaughter (or a second feed) will be 30 hours. NAWAC notes that this is the *maximum* time allowable and that in many cases bobby calves will be slaughtered in less than this time.

(b) ***What safeguards should be placed on the washing of animals?***

The washing of animals is a complex issue which is interrelated with food safety requirements of product being processed for export markets. The food safety requirements focus on there being no visual contamination of carcasses, but some submitters pointed out that this made little sense, claiming that:

- washing is a major cause of pre-slaughter stress in animals;

- pre-slaughter stress can affect the quality of the meat through increased pH levels;
- pre-slaughter stress may actually increase levels of bacteria excreted by animals; and
- swim washing actually increases the potential for transfer of microbes from the skin to the carcass during processing.

The 2006 draft Code contained two minimum standards relating to all types of washing, and one specifically relating to swim washing. These covered the close supervision of washing at all times, minimising duration and frequency of washing, and assistance of animals in difficulty while being swim washed. While the industry made little comment, there was extensive comment from one submitter on the need for much stronger controls over swim washing in particular.

Swim washing was shown to increase meat pH when lambs were washed more than twice (Petersen 1983) or in combination with other pre-slaughter stresses (Bray et al. 1989). NAWAC met with the industry to discuss the issue of washing and, in the 2006 revised draft Code, added a fourth minimum standard limiting swim washing of animals to a maximum of twice. (Industry supplied figures showing that less than 1 per cent of animals are currently swim washed more than twice.) NAWAC also added a statement on washing in the general information section, noting that any washing is a major stressor in the pre-slaughter period. For example, repeated shower washing has been found to increase meat pH (Gregory 2007). NAWAC wishes to encourage the development of improved methods, utilising new technology, which are less stressful to the animals. Submissions received following these changes again showed acceptance by the industry, with, once again, one submitter continuing to call for much stronger controls on swim washing.

(c) ***Should horned cattle be accepted for processing at commercial slaughter premises?***

Horned cattle can present a significant risk of injury to other animals and to workers. This is of particular concern in New Zealand because of the large number of bulls (rather than steers) produced for beef. The 2006 draft Code contained a minimum standard preventing horned cattle from being presented for slaughter at commercial premises. Several submissions were received asking that this minimum standard be removed for a variety of reasons:

- Horned cattle were not a problem for rural butchers.
- The other minimum standards sufficiently addressed the management of the risk of horned animals injuring other animals.
- Dehorning adult cattle on the farm prior to transport was likely to be stressful and/or painful and could result in significant stress and blood loss prior to transport to slaughter.
- The presence of horned cattle in some mobs did not result in significant injury to the animals.

- It was suggested that the appropriate place to minimise injury during handling and transport would be in the transport code of welfare.
- As long as horned cattle were managed appropriately, there was no reason for their selection for slaughter to be regarded as an animal welfare issue.
- The minimum standard had potential to cause considerable stress and injury to animals due to the implied requirement for dehorning of horned cattle prior to slaughter.

The minimum standard was removed from the 2006 revised draft Code and there were no submissions on the issue. NAWAC, noting that the majority of cattle in New Zealand are already dehorned, then had further discussions regarding its desire to make it unacceptable to have horned animals transported to, and slaughtered in, commercial premises. NAWAC recognised that, in the long term, the effect of this change would be to encourage routine earlier disbudding of horned breeds. However, in the short term, the change would require older animals to be dehorned, with allowance for the wounds to heal prior to slaughter. The requirements for dehorning older animals are covered by the painful husbandry procedures code, and a key principle and the first minimum standard in that code are that painful procedures should only be performed when needed and not as a routine. Introducing a ban on the slaughter of horned animals at commercial premises would force more animals to be dehorned, and would run counter to the key principle of minimising painful procedures. This would be especially so when it is considered that not all horned cattle would need to be dehorned for either animal welfare or human safety reasons.

NAWAC has therefore recommended as best practice that horned cattle should not be presented for slaughter at commercial premises. Instead, cattle belonging to horned breeds, and destined for slaughter at commercial premises, should be disbudded while they are calves. NAWAC has determined that, if horned cattle are presented for slaughter at commercial premises, the Code ensures that the potential for any resultant injuries to animals is minimised.

One member of NAWAC felt strongly that an immediate ban on the slaughter of horned animals at commercial premises should be introduced.

18. **Stunning and sticking of large mammals**

Apart from the issue of Shechita slaughter (which is addressed in section 22 of this report, “Shechita slaughter”), there were five other key issues raised.

(a) ***Should homekill operators be required to stun sheep?***

The New Zealand Rural Butchers Association, New Zealand Pet Food Manufacturers Association and New Zealand Federated Farmers argue that the homekill operator (i.e. the homekill service provider or pet food operator) should be exempt from the requirement in the Code for sheep to be stunned prior to slaughter on the farm. They made the following points in their submissions and in discussions held with NAWAC:

- Each job attended by the homekill operator is unique in its circumstances and in the challenge it presents in terms of carrying it out efficiently, effectively and safely. The frequent lack of facilities provided by lifestyle block farmers was particularly noted.
- The majority of sheep being slaughtered by homekill operators are being killed by a knife cut to the throat without a prior stun. This is the "New Zealand farmers' cultural way" and New Zealand farmers should retain the right to slaughter sheep in this manner. The remainder are killed by a firearm.
- Cutting the throat without prior stunning is more humane than an ineffective electrical stun or bullet.
- Shooting a sheep can ruin the carcass.
- Not all homekill operators own firearms, including captive bolt firearms.
- The central problem in using a firearm to kill a sheep is one of safety for the operator and potentially other humans and other animals in the vicinity.
- A captive bolt firearm often cannot be safely used by the homekill operator on their own in situations where there are no facilities suitable for restraining the animal (i.e. they would be potentially putting their own safety at risk).
- The preference is to kill the animal near the vehicle on which the carcass is to be loaded for transport (i.e. homekill operators do not want to have to drag the carcass to the vehicle from a race or other area where it could potentially be restrained for stunning).
- Should the Code state that prior stunning is required, and assuming that the on-farm slaughter code when produced allows farmers to kill sheep without prior stunning, then it is likely that homekill operators either will have the farmer kill the animal and then contract to process the carcass, or will kill the animal themselves at no cost and as a favour to the farmer and then contract to process the carcass.
- The pre-slaughter stress suffered by animals being processed through a commercial slaughter premises outweighs any suffering resulting from a knife cut to the throat on-farm without a prior stun being administered.

NAWAC makes the following points in response:

- The prevailing international view, subscribed to by NAWAC, is that animals are likely to experience an unreasonable level of pain during the cut to the neck given the magnitude of the wound and the number of tissues and nerves severed.
- Consciousness or sensibility, and the associated ability of the animal to feel pain and experience distress, is not lost immediately after the neck cut. The time to loss of brain responsiveness is 5 – 22 seconds in sheep (Gregory and Wotton 1984b).
- There is nothing to support the assumption that the procedure is made more humane by breaking the neck or severing the spinal cord immediately after cutting

the throat. Conversely, based on Tidswell et al. (1987) results, it could be argued that the extra trauma might even increase the animal's pain and distress.

- The Code does not apply to on-farm slaughter by a farmer or their employee where the carcass is for their own use (see section 16(a) of this report, "Should the Code cover on-farm slaughter by the farmer/employee?").
- While all methods of stunning are open to failure from time to time, this does not amount to an argument for not stunning.
- If shooting a sheep may ruin a carcass, it is then for the owner of the animal to arrange for it to be transported to a place where it can be stunned without shooting.
- Homekill operators are running a *commercial business* and therefore it is reasonable to expect them to meet an acceptable standard of welfare in providing their service and generating revenue for themselves. This includes having available the appropriate equipment to carry out the task, such as a firearm and/or captive bolt firearm.
- The perception that some people may try to find a way to circumvent a particular minimum standard in a code is not in itself a valid reason for lowering that minimum standard.
- The issue of safety (personal, other humans and animals) is for the homekill operator to assess at the time and, if the job cannot be safely undertaken, it is then the responsibility of the owner of the animal to arrange for it to be transported to a place where it can be stunned safely. This may particularly apply to lifestyle block farmers who lack appropriate facilities and are surrounded by urban housing.
- In experienced hands, the restraint required for shooting a sheep with a captive bolt firearm should be no more of an imposition on the operator than the restraint needed for cutting the throat of an unstunned sheep.

For these reasons, NAWAC has determined that homekill operators will be required to stun sheep prior to slaughtering them. NAWAC has provided general information on the stunning and slaughter of animals on the farm in section 3.4 of the Code.

NAWAC further notes that it became apparent in discussion with the industry groups that there was some confusion by them on the issue of what constitutes a stun. NAWAC notes that to stun an animal is to render it insensible, and that this includes the use of reversible methods (e.g. electrical) and irreversible methods (e.g. free-bullet firearm).

(b) ***Should controlled atmosphere stunning of large mammals be allowed?***

There is currently no use of controlled atmosphere stunning for large mammals in New Zealand. The 2002 draft Code allowed for "carbon dioxide gas in a suitably enclosed chamber" to be used as a method of stunning large mammals, and this was opposed by one submission which included references to support its position. Controlled atmosphere stunning of large mammals was not included in the 2006 draft

Code or in the 2006 revised draft Code, and no submissions were received on this issue. While the Code currently allows for three methods of stunning only (use of a captive bolt firearm, an electrical stunner or a suitable firearm), the Code could be amended in the future should industry desire to introduce controlled atmosphere stunning of large mammals into New Zealand. NAWAC would first require industry to provide scientific validation of the procedures it intends to use.

(c) ***What should be the minimum duration of electrical stun and the minimum current levels to be applied?***

The 2002 draft Code and 2006 draft Code both provided, as a minimum standard, that "the duration of the stun must be at least 2 seconds" and further stated minimum stunning currents that must be used for different species. All key industry groups made submissions, on both draft Codes, opposing what they saw as a change from their standard operating practice. They were concerned that the duration of the stun was being increased from 1 second (the standard industry practice) to 2 seconds, and that the prescribed currents varied from standard industry practice (being generally higher). One submission received on the 2002 draft Code requested that the stun duration be 3 seconds, and another that it be at least 2 seconds.

When current duration is increased from <1 second to 3 seconds, the duration of insensibility in lambs provided by the stuns rises from 39 seconds (± 6 sd) to 63 seconds (± 16 sd) (Gregory 2007). Increasing current duration to 6 seconds increases the period of insensibility further, to 87 seconds (± 25 sd). There are therefore welfare benefits from maximising the period of current flow.

NAWAC made changes to this minimum standard for the 2006 revised draft Code. This draft provided, as a minimum standard, that "the correct current level must be attained within 1 second of the initiation of the stun and must be maintained for at least 1 – 3 seconds". This minimum standard aligns with the recommended guideline of the World Animal Health Organisation (Office International des Epizooties, OIE). The draft Code further provided, as general information, the current levels for various species as recommended by the OIE guidelines. Industry appeared to be happy with the redraft, although some still queried the current levels as provided in the OIE guidelines.

(d) ***What should be the maximum duration between application of a reversible electrical stun and completion of the bleeding out process?***

During a slaughter process involving a reversible electrical stun, the welfare of the animal is protected as a result of the head-only electrical stun inducing temporary insensibility in the animal. The animal remains in this insensible state during exsanguination, which results in loss of brain function. For reversible electrical stunning, the Code provides that both the severance of the carotid arteries and the secondary procedure (induction of cardiac fibrillation, thoracic stick or other method) must be completed within 40 seconds of stunning for adult cattle, within 30 seconds

of stunning for bobby calves and vealers, and within 15 seconds of stunning for pigs. These times remain unchanged from the 2006 revised draft Code, and are slightly longer than those prescribed in the 2006 draft Code. The basis for selection of the specified time intervals was questioned by submitters.

In evaluating the scientific literature on the period of insensibility following reversible electrical stunning, the following factors have been considered by NAWAC:

- The duration of the period of insensibility depends on an effective stun being applied (i.e. an epileptiform seizure with tonic and clonic convulsions has been induced). The Code requires that current be applied for a minimum of 1 second, and states (in general information) the OIE recommended minimum current levels. Hence, the OIE guideline recommends 1.5 amps for adult cattle at sufficient voltage to achieve 1.5 amps within 1 second and maintain it for 1 – 3 seconds. Signs of an effective stun are provided in Appendix IV to the Code. The Code requires that an ineffective stun be followed by remedial action before any other procedure is undertaken.
- An acceptable neck cut severs both carotid arteries. If this is not achieved, remedial action is required. The most effective and humane cut should sever both jugular veins as well.
- The correlation of the visual signs of a return to sensibility (return of rhythmic breathing, return of corneal or palpebral reflexes, head righting reflex) with other scientific measures of sensibility/insensibility (EEG, ECoG, response to visual or sensory stimuli, release of neurotransmitters) allows a scientifically based judgement to be made as to the duration of insensibility, but the time of onset of a return to perception of pain is more difficult to assess (Gregory and Wotton 1988). The time of a return to sensibility is believed to be after the onset of rhythmic breathing and before awareness of the animal's surroundings returns (Wotton et al. 2000). Cook et al. (1995) considered that the release of the neurotransmitters glutamate, aspartate and gamma amino-4-butyrate conferred analgesia during the period up to recovery of awareness and may confer analgesia or hypoalgesia for periods as long as 15 minutes after the stun. This has been confirmed using pain evoked cortical responses (Gregory and Wotton 1988).
- The time from neck cut to loss of responsiveness to visual stimuli measured by ECoG in calves is a mean of 17 seconds (95 per cent range 9 – 25 seconds), with a flat ECoG recorded after a mean of 23 seconds (Gregory and Wotton 1984a). Carotid ballooning was not seen in this study. No estimates for adult cattle are available.
- Carotid artery occlusion (carotid ballooning) that may delay exsanguination and sustain blood pressure and brain perfusion is a feature of the neck stick in cattle. Carotid ballooning is a significant occurrence in calves. Anil et al. (1995) recorded that six out of 15 electrically stunned calves in their study exhibiting carotid ballooning. In the UK and Australia, Gregory et al. (2006) reported

ballooning to be common and severe in both adult cattle (16 per cent) and calves (25 per cent) stunned by captive bolt and electricity respectively. NAWAC understands that it is also common in cattle and water buffalo that are slaughtered without stunning. Carotid ballooning can significantly delay the onset of loss of brain function due to exsanguination. Anil et al. (1995) found that, in those calves which exhibited carotid ballooning, aortic blood pressure was higher for longer than in the non-ballooning group, and the time to loss of response to visual stimuli (maximum 104 seconds) and the onset of an isoelectric ECoG (maximum 156 seconds) was extended.

- The principal animal welfare justification for the application of a secondary slaughter procedure (thoracic stick, induction of cardiac fibrillation, etc) following the primary neck cut is to overcome the risk of the animal recovering some sensibility as the result of carotid occlusion and delayed exsanguination.
- Because electroimmobilisation is routinely used in New Zealand slaughter premises following the primary neck cut and secondary stick for reasons of operator safety, the visual signs of returning sensibility of an animal are masked. Therefore, the welfare of the animal can be protected only by making a scientifically informed judgement about the maximum time that can elapse between stunning and sticking (neck plus thoracic sticks) based on available research findings and having regard to the issues listed above.
- Gregory et al. (1996), using 200 volts for 3 or 7 seconds to stun calves, found the time from stun to the return of head righting reflexes to be of the order of an average 67 to 75 seconds, with the shortest observed time being 44 seconds. Corneal reflexes returned in the same approximate time. When 250 volts were applied for 3 seconds, the time to return of response to visual stimuli was 47 – 98 seconds and head righting reflexes returned in 59 – 84 seconds. The corresponding times were shorter when 150 volts were used.
- Wotton et al. (2000) examined recovery following head-only stunning in 25 adult cattle. Voltages from 160 to 275 were applied for less than 1 second. The currents achieved ranged from 0.74 to 1.70 amps. Of those that received more than 1 amp (21), five were not stunned. Of those that were stunned (16), rhythmic breathing resumed after 31 – 90 seconds and the animals were standing after 47 – 257 seconds.
- Anil (1991) found that the time to return of rhythmic breathing as the first sign of recovery ranged from 18 – 66 seconds in pigs. All pigs remained unresponsive to a nose prick (an indicator of consciousness) for at least 38 seconds (Anil 1991). The time to loss of visually evoked responsiveness following a chest stick in pigs was 14 – 23 seconds (Wotton and Gregory 1986).

NAWAC concludes that these data suggest that, if the neck and thoracic sticks are completed within 40 seconds of the stun, almost all adult cattle would die without recovering sensibility and none would experience pain. If the selected time was

extended to 50 or 60 seconds, an increasing proportion of animals (notably, those that exhibited carotid ballooning) could recover sensibility before dying.

Since the data indicates that the period of insensibility in calves is shorter, it is recommended that the interval from stun to neck and thoracic sticks be kept to 30 seconds.

Similarly for pigs, if the stunning to sticking interval is longer than 15 seconds the chance of recovery of sensibility is increased.

NAWAC notes that the electrical stunning procedures (i.e. voltage, amperage and duration of stun) employed in New Zealand may differ from those referred to above, but there is no documented evidence of the effective stun duration under commercial conditions in New Zealand, and NAWAC has had to rely on the published data.

(e) ***How should the processing of foetuses be handled to ensure their welfare?***

The issue of the processing of foetuses, particularly with regard to the foetal blood collection industry, was initially overlooked in the 2002 draft Code and then left out of the 2006 draft Code in error. It was subsequently addressed in the 2006 revised draft Code, which required that, in the case of heavily pregnant animals being slaughtered, the foetus must not be removed from the uterus sooner than 5 minutes after the maternal neck cut or thoracic stick. This is based on the science that the neck or chest cut and the associated catastrophic blood loss during slaughter of pregnant ruminants would rapidly stop blood flow to the uterus and oxygen delivery to the foetus (Mellor 2003). Within 1 – 2 minutes this would decrease the electrical activity of the foetal brain to levels that are not compatible with arousal to an aware state (Mellor 2003). Such foetuses therefore could not suffer.

The 2006 revised draft Code also required that any living foetus removed from the uterus must be killed or prevented from inflating its lungs with air and breathing. This is because, if the foetus cannot inflate its lungs with air and elevate its blood oxygen to levels compatible with awareness (either because it is too immature or because it is prevented from doing so), the initially reversible flattening of foetal brain electrical activity would become irreversible, the heart would stop beating and the foetus would die, without suffering (Mellor 2003). If mature foetuses are removed from the uterus after slaughter of the dam and are allowed to breathe air before the flattening of their brain activity has become irreversible, they may elevate their blood oxygen to levels that are compatible with awareness. If such foetuses are then exposed to noxious (including painful) stimuli, they could suffer (Mellor 2003).

None of the submissions received on the 2006 revised draft Code addressed the issue of the processing of foetuses. NAWAC is satisfied that the provisions in the Code will appropriately protect the welfare of foetuses at the point of slaughter of the dam.

19. **Stunning of small mammals**

Should controlled atmosphere stunning of small mammals be allowed?

There has been an allowance for the use of controlled atmosphere stunning of small mammals since the Code's inception. However, NAWAC now proposes to remove this method and allow only the following three stunning methods: use of a penetrating captive bolt firearm, blow to the frontal region of the head with a heavy object, or use of an electrical stunner. One submission was received on the 2002 draft Code in respect of controlled atmosphere stunning for small mammals, opposing its use and citing research on minks; and one submitter on the 2006 revised draft Code noted that they had used controlled atmosphere stunning in the past for processing possums. The Code could be amended in the future should industry desire to use controlled atmosphere stunning for small mammals. NAWAC would first require industry to provide scientific validation of the procedures it intends to use.

20. **Stunning and bleed out of poultry**

(a) ***Should controlled atmosphere stunning of poultry be allowed?***

There was an allowance for the use of controlled atmosphere stunning of poultry in the 2002 draft Code, and this was opposed by one submission which claimed that the method resulted in an unacceptable delay in the onset of unconsciousness. Controlled atmosphere stunning of birds was not included in the 2006 draft Code or the 2006 revised draft Code. No submissions were received on the 2006 draft Code on the issue. However, there was an extensive submission on the 2006 revised draft Code arguing for the inclusion of controlled atmosphere stunning for birds. It is of note that both the *Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare 2003* and the *Animal Welfare (Layer Hens) Code of Welfare 2005* allow the use of controlled atmosphere stunning for the humane destruction of birds. NAWAC has determined that controlled atmosphere stunning of birds should be allowed and has provided minimum standards, recommended best practices and general information in the Code to address the issue and ensure that the welfare of the birds is protected. The OIE *Guidelines for the slaughter of animals for human consumption* (2005) provide for gas stunning of poultry, with the main objective being to avoid the pain and suffering of water bath stunning and killing systems, which involve shackling conscious poultry. Although stunning with a mixture of inert gases plus up to 30 per cent carbon dioxide to produce an atmosphere with less than 2 per cent oxygen by volume has welfare advantages over higher concentrations of carbon dioxide in air, it is not yet clear which gas compositions are most humane (Gregory 2005; Raj 2006). Given that insensibility is not instantaneous with gas, NAWAC has required that the birds can be visually monitored and that the procedure must result in minimum discomfort to birds. In order to achieve this, NAWAC has further recommended that birds' reactions to induction of insensibility be evaluated by direct observation of the birds when they first enter the gas until they fall over (lose posture) and become insensible.

(b) ***Should decapitation of poultry be allowed as a slaughter method?***

There has been no specific reference to decapitation of poultry in the Code since its inception, although the draft minimum standards have effectively ruled it out as a slaughter method, and no public submissions were received on the issue. Two submissions were received on the 2006 revised draft Code: one from a small operator using decapitation without prior stunning as a primary method of slaughter and wanting to continue doing so, and the other from the industry wanting to use decapitation as a backup method in plants for birds which have been prior stunned.

NAWAC has since considered decapitation of poultry both in terms of it being the primary slaughter method and in terms of it being used as a backup method for prior stunned birds. The issue is the time taken to unconsciousness in decapitated poultry, with current research indicating that, while it is relatively rapid, it is not instantaneous. Gregory and Wotton (1986) found that a normal waveform in the visual evoked response persisted for about 30 seconds after decapitation, but, since the responses were obtained in anaesthetised chickens, it is not possible to conclude that there was any association with cognitive processes in the animal's brain. Nevertheless, neither decapitation nor neck dislocation have a concussive effect on the brain, when assessed from the immediate loss of responsiveness to visual stimuli (Gregory and Wotton 1990).

NAWAC noted that, although there is no scientific certainty around this issue, the Australian Veterinary Association policy (Australian Veterinary Association 2004) indicates that decapitation of poultry without stunning should have no place in humane commercial slaughtering.

NAWAC has come to the conclusion that decapitation of poultry without prior stunning should have no place in humane commercial slaughtering. NAWAC notes the following:

- Poultry slaughter plants are run as a *commercial business* and therefore it is reasonable to expect them to meet an acceptable standard of welfare in providing their service and generating revenue for their owners. This includes having available the appropriate equipment to carry out the task humanely.
- There are two types of handheld electrical stunning instruments for poultry available internationally, and these are encouraged for use by smaller operators.
- The use of decapitation of poultry as a backup method in slaughter plants is acceptable where the birds have been stunned prior to decapitation.

(c) ***Should the Code require the cutting of both carotid arteries?***

Requirements for the cutting of the carotid arteries have been altered by NAWAC in each of the draft codes released for consultation. The 2002 draft Code contained the minimum standard that "If a cardiac arrest is not induced during electrical stunning, both the carotid arteries in the neck must be severed at neck cutting in at least 90% of the birds". While this was acceptable to the industry, a number of submissions were

received asking for the 90 per cent per cent threshold to be removed. NAWAC subsequently changed the requirement in the 2006 draft Code to "If a cardiac arrest is not induced during electrical stunning, both carotid arteries in the neck must be severed either mechanically or by the attendant". The industry then submitted that they could not ensure "on all occasions that both carotid arteries are cut" and asked that the minimum standard be rewritten on an outcome basis, focusing on the need for bleed out to be complete before birds enter the scalding tank. NAWAC agreed, and in the 2006 revised draft Code the minimum standard was reworded to "All birds must be effectively bled out before they enter the scalding tank".

NAWAC's central concern is that birds must not regain consciousness, and enough time must elapse between the neck cut and the bird entering the scalding tank for bleed out to be complete and the bird to be dead (Anon 1996). Ideally, both carotid arteries should be cut to achieve a quick bleed out, and to ensure that there are no cases of recovery of consciousness. The time to death at slaughter depends on the blood vessels cut (Raj 2004). Further, for ostriches it has been shown that they must be bled out within 60 seconds of stunning to ensure humane slaughter (Wotton and Sparrey 2002).

While NAWAC believes that compliance with the minimum standard will ensure the welfare of poultry at slaughter, NAWAC would like to see industry-led research to show that the minimum standard is being fully complied with on an ongoing basis (i.e. all birds are dead on entering the scalding tank).

21. **Stunning and killing of aquatic species**

(a) ***Should the Code allow for the desliming of eels?***

There has been a minimum standard stating that eels must be killed before they are deslimed since the Code's inception. In the industry's submission on the 2006 draft Code, they opposed this minimum standard as it was current industry practice and recognised in the Industry Agreed Implementation Standards. NAWAC held discussions with the industry to gain a better understanding of the issue and to explore possible alternatives.

Currently, desliming of eels using salt or similar chemicals requires the eels to be alive during the process and exposes them to a long period of stress (an hour or more) before death ensues. This process is no longer allowed in Germany but is still practised in the Netherlands. As such, the Europeans have been researching humane alternative methods (e.g. an electrical system for a tank of eels (Gregory 2005), deoxygenation of water using nitrogen (van de Vis et al. 2003), captive needle pistol using air pressure (Lambooij et al. 2002b)). However, many alternatives have also been found to be not humane (live chilling (Lambooij et al. 2002a), freezing and some electrical stunning methods (van de Vis et al. 2003)).

NAWAC adheres to the humane slaughter principle that animals should be rendered insensible before any slaughter process, and therefore considers that the use of salt to

deslime live eels is inhumane. However, NAWAC recognises that the industry needs time to develop commercial methods that will maintain insensibility of eels during the desliming process. Further, as noted in submissions received from eel processors, any immediate change is likely to significantly compromise the viability of a small and financially vulnerable industry. NAWAC has therefore recommended that the industry be allowed, under section 73 of the Act, to continue using the desliming process for live eels, but must find an alternative production process by 2015.

(b) ***Should the Code require the stunning of crustaceans before their killing in restaurants?***

Since its inception the Code has, with some wording changes, required that crustaceans – crabs, rock lobsters (crayfish) and freshwater crayfish (koura) – be chilled to 4°C or less at the time they are killed. The purpose of chilling is to render the crustacean insensible rather than killing it, without damaging the edible parts of the body (Lowe and Gregory 1999). In cold-blooded creatures like rock lobsters, chilling helps to reduce nerve function and metabolic activity (Lowe and Gregory 1999).

The minimum standard, as now written, meets industry requirements for processing of crustaceans, but is likely to have some impact on the restaurant trade. As chilling takes time, this may affect the ability of diners in restaurants to select live crustaceans from a tank for them to be cooked and served to them. The Restaurant Association of New Zealand noted in their submission on the 2006 revised draft Code that "Although display of live crustaceans and fish for selection by diners is not common in New Zealand, it does occur, particularly in some Asian restaurants. A requirement to chill the selected items to 4 degrees, or to chill for 20 minutes before killing will result in unacceptable delays for the customers, and we therefore strongly believe that these specifications will, in these circumstances be ignored. We cannot suggest an alternative process to cater for this very small market, but have to raise the practicability question in case there is an acceptable alternative process. If there is not, we would suggest that the minimum standard number 21 be relabelled as 'best practice' so as to avoid the possibility of prosecution for those for whom the best practise is not practicable [sic]". NAWAC notes, however, that an alternative is the use of table-top electrical stunners for crustaceans, which have been developed for use in the restaurant trade and which could be imported into New Zealand. NAWAC added an allowance for the electrical stunning of crustaceans to the minimum standard in the 2006 revised draft Code. NAWAC further notes that restaurants are a commercial business and therefore it is reasonable to expect them to meet an acceptable standard of welfare in providing their service and generating revenue for their owners. This includes having available the appropriate equipment, or allowing adequate time, to carry out the task humanely.

22. Shechita slaughter

Should Shechita slaughter of cattle, sheep, goats and poultry be allowed?

In 2001, NAWAC released a discussion paper on the animal welfare standards to apply when animals are slaughtered in accordance with religious requirements. The paper elicited a range of responses from a total of 42 submitters. Shechita, the Jewish method, is the only commercial religious slaughter procedure which raises major animal welfare concerns. Halal, the Muslim method, has been conducted commercially in New Zealand, with a pre-cut reversible stun, for many years and, therefore, meets an acceptable animal welfare standard. No submissions opposing the use of the pre-cut reversible stun were received from the Muslim community. No other slaughter method required by an established religious group was drawn to NAWAC's attention. After detailed consideration of both written and verbal submissions on the discussion paper, and the available scientific evidence, NAWAC formulated the position outlined in its report to the Minister dated 23 August 2001 regarding obligations under section 12(c) of the Act. NAWAC's position as summarised in the report was:

1. NAWAC requires as a minimum standard that all animals undergoing commercial slaughter be stunned effectively prior to the throat or neck cut. This applies to all commercial slaughter, including Halal slaughter (i.e. slaughter by the Muslim method) which already meets this minimum standard.

2. **NAWAC recommends that a dispensation be granted under section 73 of the Animal Welfare Act 1999 to allow Shechita, the Jewish method of slaughter, to be practised in order to meet the direct needs of the New Zealand Jewish community.** This is necessary to allow Jewish people to manifest their religion and belief (as provided for in the New Zealand Bill of Rights Act 1990) and because NAWAC considers that Shechita does not meet the minimum standard for commercial slaughter.

3. **However, NAWAC considers that this dispensation should be conditional upon certain requirements being met during Shechita.**

3.1 MAF approval to undertake Shechita must be contingent on each Shochet (the Jewish slaughterman) providing MAF with evidence of appropriate training and current competency in executing the neck cut effectively. This could take the form of appropriate documentation from a recognised Rabbinical Authority.

3.2 Any cattle beast, sheep or goat declared by the Shochet to be non-Kosher (due to an incorrect cut or any other reason) during the period of consciousness following the neck cut must be stunned immediately. The Shochet must make that decision immediately after making the cut.

3.3 All cattle slaughtered by Shechita must be stunned no more than 5 seconds after the cut.

4. **NAWAC notes the following additional points regarding Shechita.**

4.1 NAWAC is concerned about the long period between the neck cut and the onset of loss of brain activity in poultry (e.g. on average 90 seconds). Nevertheless, at this time, it does not intend to impose a requirement to stun poultry within 5 seconds of the neck cut because practical and aesthetically acceptable means are not readily available to effect this.

4.2 NAWAC notes the additional issue of the hind-quarters of each cattle beast and sheep not being processed because of cost and technical difficulties, so that this portion of the carcass is declared non-Kosher and cannot be consumed by the observant Jewish community. NAWAC considers that the Jewish community should be urged to process the whole carcass of each animal killed by Shechita to minimise the numbers slaughtered in this way.

4.3 NAWAC does not require post-cut stun for sheep and goats killed by successfully executed Shechita, as their average period of consciousness after the cut is usually about 5 – 7 seconds.

5. **NAWAC also considers it desirable that the Jewish community agree to participate in ongoing discussions with it regarding scientific and other developments in the humane slaughter arena.** NAWAC would wish to see the Jewish community explore approaches to stunning during Shechita that are closer to the minimum standard required for commercial slaughter in New Zealand.

6. **NAWAC is totally opposed on animal welfare grounds to the development of a Kosher export meat trade.** This would involve a vast increase in animals slaughtered by Shechita, compared to present low numbers.

7. **If there were any question of a section 73 dispensation for the domestic market being automatically applicable to Shechita for export purposes, NAWAC would wish to withdraw its recommendation for that dispensation until a mechanism can be devised to prevent export of Shechita-killed product.**

New scientific research findings that have become available since 2001 support this position. For example, it has been shown that broiler chickens in Australia during Shechita lost consciousness between 12 and 15 seconds on average after neck cutting, although some birds may have remained conscious for up to 26 seconds (Barnett et al. 2007). NAWAC has seen no reason to change its view on religious slaughter and reaffirms its position as outlined in its 2001 report to the Minister. Since the inception of the Code, the minimum standard with regard to Shechita slaughter has reflected NAWAC's position outlined in the report. Submissions on the minimum standard have continued to range from opposition to the Code allowing dispensation for the practising of Shechita slaughter (from industry, welfare and veterinary groups), to opposition to the restrictions imposed by the minimum standard on the practice of Shechita slaughter (from the Jewish community). NAWAC continued dialogue with the Hebrew Congregations on their submissions and, as a result, a number of their concerns were able to be dealt with by minor changes to the Code.

The central issue that remains for the Jewish community, however, is the requirement in the Code for a post-cut stun for cattle. This was initially vigorously opposed by

both the Wellington and Auckland Hebrew Congregations, whose preference continued to be for no post-cut stun. However, in their submission on the 2006 draft Code the Auckland Hebrew Congregation accepted the points made and believed that the proposed minimum standard allowed them to follow their religious obligations. It is of note that the Auckland Hebrew Congregation appears to have accepted this requirement on the basis that it is current practice in Australia. In the New Zealand Jewish Chronicle of 30 April 2006 John Barnett, President of the Auckland Hebrew Congregation, in a letter to the editor wrote "A five second post stun is permitted by kosher authorities in Australia, and it seemed a little hypocritical for us to be buying kosher meat in NZ that has been killed according to this process in Australia, but at the same time seek a different ruling in NZ". One concern raised around the post-cut stun by the Jewish community was its impact on subsequent bleed out of the animal. NAWAC notes, however, that current science does not support bleed out being impacted by the post-cut stun. Anil et al. (2004) found that the bleed out after neck cutting was not adversely affected by electrical or captive bolt stunning, nor was an improved bleed out achieved by neck cutting without stunning.

Given current interest internationally and with new scientific evidence NAWAC re-considered these developments in 2008/2009. In summary the European Commission adopted a proposal for a regulation that improves the conditions for animals at the time of slaughter or killing and ensures that they are humanely treated. Religious slaughter is covered by a derogation from the principle that "animals shall only be killed using a method which ensures instantaneous death or after stunning". A decision on whether to allow derogation to be left to Member States or for a general exception to be maintained in the European Union is expected in May 2009. Australian authorities have also undertaken a review of ritual slaughter practices. They are proposing a risk management framework, posited by Adams and Sheridan (2008), with specific conditions imposed which would amend current practices in order to protect the welfare of animals subject to slaughter whilst still conscious and permit export of produce slaughtered in this way.

In conclusion, NAWAC would prefer that there be no dispensation from the requirement that all animals being slaughtered commercially be stunned prior to slaughter[1]. Gibson et al (2009a, b) have shown that in calves the throat cut is associated with a noxious stimulation that would be expected to be perceived as painful. Although there is no comparable experimental evidence available for other species, it is NAWAC's strongly held view that the anatomical and physiological similarities between cattle, sheep and goats, and possibly even poultry, would indicate that these species would experience pain that is not dissimilar to that experienced by cattle.

[1] The Minister of Agriculture issued the final Code in May 2010 requiring all animals to be stunned prior to commercial slaughter, supporting NAWAC's preferred position. This means there is no dispensation for shechita slaughter in the Code.

NAWAC noted, however, that this preferred position would deny the Jewish community in New Zealand access to locally grown and commercially killed kosher meat. NAWAC believes that in order to balance animal welfare and religious rights imperatives a dispensation should be allowed. The revised draft code recommends therefore that Shechita be regarded as an 'exceptional circumstance' in accordance with section 73 of the Act and that the requirement for a pre-slaughter stun be waived for Shechita slaughter of cattle, sheep, goats and poultry, but that, as one of the conditions, a stun be applied to cattle immediately following the throat cut. Those submissions which opposed allowing any dispensation for Shechita slaughter were particularly concerned with trade implications and any allowance for export. NAWAC does not support the development of an export trade in kosher meat and a minimum standard was included so that the dispensation applies only to the relatively small number of animals killed for domestic consumption.

This dispensation balanced the knowledge that while the throat cut is a severely painful event, the duration of the pain in sheep, goats and poultry prior to the animal becoming unconscious due to blood loss is short (5-22 seconds). The duration can be much longer in cattle (one minute or more) but the requirement for an immediate (i.e. within five seconds) stun following the throat cut puts cattle on the same footing as the other species. Recently, Gibson et al (2009c) have demonstrated that applying a non-penetrative captive bolt stun ameliorates the noxious sensory input caused by the throat cut.

This exception is to allow the New Zealand Jewish community to manifest its religion and belief (as provided for in the New Zealand Bill of Rights Act 1990). NAWAC considers the exception is required because Shechita does not meet the minimum standard necessary for the purpose of the Act to be met. It restricts the number of conscious animals slaughtered and details the practices surrounding such slaughter.

23. **Homekill service providers**

(a) ***When does responsibility under the Act transfer from the owner or person in charge of the animal to the homekill operator?***

The New Zealand Rural Butchers Association, New Zealand Pet Food Manufacturers Association and New Zealand Federated Farmers sought clarification in the Code as to exactly when responsibility under the Act transferred from the owner or person in charge of the animal to the homekill operator (i.e. the homekill service provider or pet food operator). Section 7 of the Code has been rewritten to clarify this issue, with NAWAC noting that the homekill operator, in being contracted to provide their service, assumes the responsibility and obligations of the person in charge for the stunning and slaughter processes provided for in the Code. Up to the point of slaughter, the farmer or their employee *and* the homekill operator are responsible for the welfare of the animal.

NAWAC further notes that the homekill operator should give clear directions to the farmer or their employee regarding the form and degree of restraint of the animal they require before undertaking the stunning and slaughter processes and assuming responsibility for the welfare of the animal. The homekill operator should decline to proceed with the stunning and slaughter processes until their requirements have been met.

(b) ***Which minimum standards apply to homekill operators?***

The New Zealand Rural Butchers Association, New Zealand Pet Food Manufacturers Association and New Zealand Federated Farmers sought clarification in the Code as to which minimum standards apply to the homekill operator (i.e. the homekill service provider or pet food operator). NAWAC notes in section 7 of the Code that those minimum standards in the Code that are "relevant apply equally to all animals killed outside of slaughter premises (e.g. on the farm)", and NAWAC has added a new minimum standard which specifically lists those minimum standards in the Code that also apply to homekill operators.

24. **Quality assurance programme**

Should quality assurance programmes be compulsory and, if so, who should be required to establish them?

NAWAC has included in the Code, as a minimum standard, the requirement that commercial slaughter premises processing mammals and birds have in place an independently verified quality assurance programme. This programme is to identify:

- positions of individual persons who are responsible for carrying out specified tasks;
- methods and procedures the company will implement to achieve specified tasks;
- the system and frequency of checks on facilities and equipment;
- training, competence and supervision of persons carrying out specified tasks;
- a procedure for recording numbers and circumstances of all animal deaths and injuries prior to slaughter, and the corrective actions (if any) taken; and
- corrective actions that will be taken in the event of non-compliance with the requirements of the programme.

A number of industry-related submissions were received on this minimum standard during consultation on the 2006 draft Code and the 2006 revised draft Code. While some concern was expressed by submitters as to the need for such a requirement, this had reduced to only one submitter in the second-round consultation.

NAWAC holds the view that the process of slaughtering animals has the potential for extreme welfare compromise if it is not done well. Furthermore, New Zealand's reputation as an international leader in animal welfare, and its reliance on the meat export trade, could be put at risk if the slaughtering of animals is not carried out humanely.

It is recognised that all major commercial slaughter premises will already have a quality assurance programme in place, and that this will simply need adapting to meet the requirements in the Code. Homekill service providers and dual operator butchers will not be required to have a quality assurance programme in place, due to their small size relative to the cost of implementing such a system.

Other issues considered by NAWAC

25. NAWAC has considered how the Code aligns with OIE guidelines for the slaughter of animals for human consumption. NAWAC believes the Code to be consistent with OIE guidelines, but has not included in the Code much of the advisory material contained in OIE guidelines. NAWAC is not aware of any examples where the Code deviates significantly from the guidelines.

The nature of any significant differences

26. All significant differences of opinion about the Code, or any of its provisions, have been set out above or in NAWAC's response to submissions.

27. Two significant difference of opinion about the Code, or any of its provisions, were recorded within NAWAC. As noted earlier in the report, one member of NAWAC felt strongly that an immediate ban on the slaughter of horned animals at commercial premises should be introduced notwithstanding the considerations set out in section 17(c) above. The other members of NAWAC respect this view but consider that the issue can be tackled in another way which reduces the disadvantages of an immediate ban.

28. NAWAC was divided on whether or not a dispensation should be made for Shechita slaughter. After lengthy deliberation, NAWAC reached a consensus on the recommendations set out in the draft code and in Section 22 above. Essentially there were two views. One view, supported by the Massey research findings, holds that animal welfare considerations are paramount and there are no exceptional circumstances which justify cutting the throat of a conscious animal. This view draws on the requirement (section 12 (c) of the Animal Welfare Act) that animals be killed in a manner that does not involve unreasonable or unnecessary suffering or distress.

    A second view holds that the rights of the New Zealand Jewish community to practise its religious beliefs accorded by the Bill of Rights Act must be balanced against animal welfare considerations and that animal welfare compromise can be minimised by specifying how and to what extent the slaughter should be carried out. In particular, the application of a stun immediately after the throat cut minimises the duration of sensibility of the animals. The stun could be applied to cattle, sheep and goats for which appropriate technology exists. NAWAC's recommendation for a post-cut stun is limited to cattle for which good empirical evidence of sensibility of significant duration following the throat cut exists. Post-cut stunning of poultry is

technically difficult to achieve. This view takes account of the requirement that if NAWAC considers there to be exceptional circumstances in accordance with section 73 of the Act, it must have regard to religious practices among other things.

Dr Peter O'Hara
Chairman, National Animal Welfare Advisory Committee
22 April 2009

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