



# Submission on the Animal Welfare (Dairy Cattle) Code of Welfare 2010 (NZ): Blunt Trauma Provisions

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**Voiceless Limited**

ACN 108 494 631  
2 Paddington Street  
Paddington NSW 2021

**P** +61 2 9357 0703

**F** +61 2 9357 0711

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## ABOUT VOICELESS

As an innovator, capacity builder and ideas-generator, Voiceless plays a leading role in the development of a cutting edge social justice movement, animal protection.

With a highly professional and well-educated team, Voiceless brings together like-minded compassionate Australians from the legal, academic, non-profit and education sectors to form strong and effective networks.

Voiceless believes in the provision of quality information, analysis and resources to inspire debate and discussion and to empower individuals and organisations to generate positive social change.

Voiceless is a non-profit Australian organisation established in May 2004 by father and daughter team Brian and Ondine Sherman.

To build and fortify the animal protection movement, Voiceless:

- gives grants to key projects which create the groundswell for social change;
- cultivates the animal law community through the provision of leadership, educational opportunities and resources; and
- raises awareness of animal protection issues within the education system in order to strengthen democratic skills, promote critical thinking and encourage advocacy amongst students.

### PATRONS

**J.M. COETZEE**, Nobel Prize for Literature Winner 2003, author of 'Lives of Animals' and 'Elizabeth Costello'

**BRIAN SHERMAN AM**, businessman and philanthropist

**DR JANE GOODALL**, world-renowned primatologist and animal advocate

**THE HON MICHAEL KIRBY AC CMG**, former judge of the High Court of Australia

### AMBASSADORS

**HUGO WEAVING**, Actor: Oranges and Sunshine, Last Ride, Little Fish, Lord of the Rings Trilogy, Matrix Trilogy, The Adventures of Priscilla Queen of the Desert

**EMILY BARCLAY**, Actor: Prime Mover, Piece of my Heart, Suburban Mayhem, In My Father's Den

**ABBIE CORNISH**, Actor: w.e., Suckerpunch, Limitless, Bright Star, Stop Loss, Elizabeth: The Golden Age, A Good Year, Somersault, Candy

For further information visit <http://www.voiceless.org.au>

All correspondence in relation to this submission should be directed to:

Mr Emmanuel Giuffre  
Voiceless  
2 Paddington Street  
Paddington NSW 2021 AUSTRALIA  
T: + 612 9357 0713  
F: + 612 9357 0711  
Email: [emmanuel@voiceless.org.au](mailto:emmanuel@voiceless.org.au)

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## 1. Introduction

- 1.1 This submission addresses the proposed changes to the Animal Welfare (Dairy Cattle) Code of Welfare 2010 (NZ), herein **‘the Code’**.
- 1.2 The National Animal Welfare Advisory Committee (NAWAC) is proposing changes in two parts of the Code:
- (i) New text and minimum standards in section 5.10 on ‘Calf Management’ to address routine killing on farms; and
  - (ii) Amended text in section 6.4 on ‘Emergency Humane Destruction’ to distinguish between routine and emergency killing.
- 1.3 While Voiceless is an Australian animal protection group, it recognises the importance of the New Zealand dairy industry in shaping industry practises internationally, including in Australia. Accordingly, Voiceless commends NAWAC for acknowledging the need to reassess the use of blunt trauma to kill dairy calves. This is an opportunity for New Zealand to become a market leader in calf welfare in the dairy industry and set an important precedent for other jurisdictions to follow.
- 1.4 As a significant number of male bobby calves are born every year to maintain milk production – for example, it was reported that approximately 1,500,000 bobby calves are slaughtered in New Zealand each year<sup>1</sup> and 700,000 bobby calves are slaughtered in Australia each year<sup>2</sup> – a higher standard concerning blunt trauma is vital to improving animal welfare in the dairy industry.
- 1.5 Considered a ‘waste’ or ‘by-product’ of the dairy industry,<sup>3</sup> bobby calves are rarely afforded the same consideration as production animals. While production animals themselves are subject to cruelty, bobby calves are left in an unacceptably vulnerable position and are afforded limited legal protections.
- 1.6 Higher standards are necessary to ensure that bobby calves are treated humanely, regardless of whether they are reared as replacement dairy or beef cattle, transported for slaughter or killed on farm.
- 1.7 In relation to NAWAC’s request for public submissions on the use of blunt trauma, it is Voiceless’ position that blunt trauma is a cruel, imprecise and inhumane method of slaughter that cannot and should not be justified on economic grounds. Accordingly, Voiceless

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<sup>1</sup> SAFE, ‘Missing: Bobby Calves’ available at <http://safe.org.nz/Campaigns/dairy-farming/Bobby-calves/>, accessed 8 May 2014

<sup>2</sup> Animal Health Australia, Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock (Department of Agriculture, Fisheries and Forestry, 2012) 59.

<sup>3</sup> Phillip Jones, ‘The Welfare of Male Calves in Welsh Organic Dairy Herds’ (2011) available at [http://www.organiccentrewales.org.uk/uploads/welfare\\_of\\_male\\_calves\\_in\\_welsh\\_organic\\_dairy\\_herds.pdf](http://www.organiccentrewales.org.uk/uploads/welfare_of_male_calves_in_welsh_organic_dairy_herds.pdf), accessed 9 April 2014.

respectfully submits that the use of blunt trauma is not acceptable for either the routine slaughter or the emergency slaughter of bobby calves. Key objections to the use of blunt trauma include the following:

- 1.7.1 Blunt trauma is an inhumane method of killing that does not effectively result in immediate insensibility or death;
  - 1.7.2 The method causes undue suffering as it can be difficult to determine whether the procedure was effective and secondary means are often necessary;
  - 1.7.3 The anatomy of cattle, specifically skull thickness, renders the method inappropriate regardless of age; and
  - 1.7.4 Outcomes of blunt trauma are inconsistent, as the acute skill required for successful implementation is hindered by human fatigue, the lack of an accreditation scheme and animal restraint issues.
- 1.8 Further, blunt trauma is not only used for emergencies, but has become a routine means of slaughtering bobby calves on farms. There is a lack of scientific research on the prevalence of killing methods on farms, but the failure of farms to accept designated methods of killing allow for blunt trauma to be employed at will.<sup>4</sup> Further, it appears the method is readily available to farmers despite the fact that it has not been approved by the OIE.<sup>5</sup> Although there is evidence to suggest that blunt trauma is commonly used to kill other animals such as turkeys and piglets, evidence for the effectiveness of the method is scarce<sup>6</sup> and in theory this technique is applied only as a last resort in emergency situations.<sup>7</sup>
- 1.9 Those aspects of the amendments to the Code that Voiceless supports and opposes are outlined below in section 3 of this submission. For the purposes of this submission, Voiceless has confined its comments to particular aspects of dairy calf treatment. The lack of comment on other aspects of calf welfare and the dairy industry in general should not be read as implying that we endorse any form of factory farming.

## 2. Reasons for opposition to blunt trauma

### Opposition by Various Groups

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<sup>4</sup> Steven Matthis, 'The People Perspective of Euthanasia' Division Chair of Agricultural and Industrial Programs accessed at [http://www.cals.ncsu.edu/an\\_sci/extension/swine/healthyhogs/book2004/matthis/matthis.pdf](http://www.cals.ncsu.edu/an_sci/extension/swine/healthyhogs/book2004/matthis/matthis.pdf), accessed on 7 May 2014.

<sup>5</sup> Terry Whiting, Gregory Steele and Chris Green, 'Evaluation of methods of rapid mass killing of segregated early weaned piglets' (2011) 52 *The Canadian Veterinary Journal* 7, 3.

<sup>6</sup> M.A. Erasmus et al, 'Using time to insensibility and estimated time of death to evaluate a nonpenetrating captive bolt, cervical dislocation and blunt trauma for on-farm killing of turkeys' (2010) 89 *Poultry Science*, p1346.

<sup>7</sup> *Ibid*, n 5.

- 2.1 From an Australian perspective, a number of groups expressed their opposition to the use of blunt trauma as an acceptable method of killing calves in the recent calls for submission on the Australian Animal Welfare Standards and Guidelines (**S&G**).<sup>8</sup> The S&G propose to update and harmonise the existing Model Code of Conduct (**MCOP**) in Australia and seek to address national inconsistencies in cattle care and management for all cattle farms in Australia, but are yet to be implemented.<sup>9</sup> These groups include: Animal Liberation Queensland, Cat Alliance of Australia, NSW Young Lawyers Animal Law Committee, Sentient, RSPCA Australia and RSPCA South Australia.
- 2.2 These submissions recommend a prohibition of killing calves by a blow to the head, regardless of age. In accordance with the S&G themselves, the use of a close range firearm or a captive bolt is recommended instead.<sup>10</sup> Further, the submissions from RSPCA Australia and Sentient both referred to the recent AVMA<sup>11</sup> euthanasia guidelines<sup>12</sup> which identified manually applied blunt trauma to the head as an unacceptable method of euthanasia for cattle and small ruminants. According to AVMA, the skulls of calves are too hard to achieve immediate destruction of brain tissue, meaning the calves are not effectively rendered unconscious or dead. The method also requires considerable skill for it to be successful at the first attempt.
- 2.3 Blunt trauma is also opposed by international animal protection groups. For example, the Animal Welfare Committee of the American Association of Bovine Practitioners is explicit in their position on the use of blunt trauma. In a report on the practical euthanasia of cattle, the Committee states, "*ethical considerations do not change for the calf because it is small or more easily handled. Calves can easily be euthanized with a penetrating captive bolt gun.*"<sup>13</sup> The report goes on to state that manually applied blunt trauma to the head is not ethical or humane.

## Welfare Concerns Associated with Blunt Trauma

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<sup>8</sup> *Australian Animal Welfare Standards and Guidelines: Cattle, 1<sup>st</sup> Ed., Public Consultation Version 1.0, 21 February 2013, Standing Council on Primary Industries.*

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid*, G11.1.

<sup>11</sup> American Veterinary Medical Association, Guidelines for the Euthanasia of Animals: 2013 Edition.

<sup>12</sup> *Ibid.*

<sup>13</sup> Animal Welfare Committee of the American Association of Bovine Practitioners, Practical Euthanasia of Cattle: Considerations for the Producer, Livestock Market Operator, Livestock Transporter, and Veterinarian, [https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&cad=rja&uact=8&ved=OCFoQFjAI&url=http%3A%2F%2Fwww.cdfa.ca.gov%2FAHFSS%2FAnimal\\_Health%2Fpdfs%2Feuthanasia\\_aabpfinal\\_color.pdf&ei=vXNPU8PKD4\\_SkAXE7oCAA&usq=AFOjCNEGCVcFQ0LRRgUJcbFsYMY7ZchFOQ](https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&cad=rja&uact=8&ved=OCFoQFjAI&url=http%3A%2F%2Fwww.cdfa.ca.gov%2FAHFSS%2FAnimal_Health%2Fpdfs%2Feuthanasia_aabpfinal_color.pdf&ei=vXNPU8PKD4_SkAXE7oCAA&usq=AFOjCNEGCVcFQ0LRRgUJcbFsYMY7ZchFOQ), accessed on 30 April 2014.

- 2.4 Instantaneous death requires minimal pain or distress and a rapid, irreversible loss of consciousness and brain function.<sup>14</sup> Although blunt trauma could *theoretically* be performed properly to cause instantaneous death,<sup>15</sup> a number of unavoidable factors render the outcome improbable and consistency impossible.
- 2.5 Firstly, blunt trauma only has the potential for effective use on animals with thin craniums.<sup>16</sup> There is evidence to suggest that the skulls of calves are too thick and tough for a single sharp blow to the skull to successfully result in immediate unconsciousness: “*manually applied blunt force trauma to the head is not acceptable for calves because their skulls are too hard to achieve immediate destruction of brain tissue leading to unconsciousness and death.*”<sup>17</sup> Voiceless endorses AVMA’s finding that “*the anatomic features of neonatal calves make manually applied blunt force trauma to the head unacceptable as a method of euthanasia for this species.*”<sup>18</sup>
- 2.6 Secondly, it is difficult to determine loss of consciousness based purely on physical reactions. A study on piglets demonstrated that “*an unconscious convulsing piglet is difficult or impossible to differentiate from a conscious brain-injured piglet.*”<sup>19</sup> Although studies directly on calves are lacking, calves may still be vulnerable to prolonged suffering due to an unclear and imprecise declaration of death.
- 2.7 Thirdly, the degree of restraint required and positioning complications make it difficult, if not impossible, to consistently apply the technique of blunt trauma.<sup>20</sup> In addition to the serious animal welfare concerns raised by incorrect application of blunt trauma, dairy farmers “*often find it displeasing and soon become fatigued.*”<sup>21</sup> Such fatigue naturally depletes the consistency of accurate application and creates grave concern for animals killed on mass.

#### Inadequate Means for Emergency Situations

- 2.8 Blunt trauma is not an acceptable means of killing, even in an emergency situation. Firstly, many guides only permit blunt trauma on calves less than 24 hours old.<sup>22</sup> This factor is not

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<sup>14</sup> M.A. Erasmus et al, ‘Using time to insensibility and estimated time of death to evaluate a non-penetrating captive bolt, cervical dislocation and blunt trauma for on-farm killing of turkeys’ (2010) 89 Poultry Science, p 1345.

<sup>15</sup> AVMA Guidelines for the Euthanasia of Animals: 2013 Edition.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid, 57.

<sup>18</sup> Ibid, 36.

<sup>19</sup> Terry Whiting, Gregory Steele and Chris Green, ‘Evaluation of methods of rapid mass killing of segregated early weaned piglets’ (2011) 52 *The Canadian Veterinary Journal* 7, 8.

<sup>20</sup> AVMA Guidelines for the Euthanasia of Animals: 2013 Edition, 57.

<sup>21</sup> Ibid, 36.

<sup>22</sup> See for example, Standing Council on Primary Industries, Australian Animal Welfare Standards and Guidelines: Land Transport of Livestock, Edition 1, Version 1.1, 2012, accessible at <<http://www.animalwelfarestandards.net.au/files/2011/02/Land-transport-of-livestock-Standards-and-Guidelines-Version-1.-1-21-September-2012.pdf>> GB4.17, accessed on 30 April 2014.

mentioned in the Code's provision that blunt trauma may be used in emergency situations. Although Voiceless opposes the use of blunt trauma in any situation, the Code should at the very least restrict the use of blunt trauma in an emergency situation to calves that are less than 24 hours old. Secondly, many guides to euthanasia refer to a secondary means of killing after blunt trauma has already been administered. For example, "*a follow-up procedure, such as bleeding-out or pithing, should be used immediately after stunning to ensure death.*"<sup>23</sup> This indicates that blunt trauma is merely a method of stunning, and is ineffective alone to cause death. Such a method cannot be relied upon to ensure a humane death in any situation. Accordingly, Voiceless recommends that if blunt trauma is used in emergency situations, a 'follow-up' procedure is also required.

## Transport

- 2.9 An attempt is sometimes made to 'justify' blunt trauma on the basis that it avoids issues concerned with transportation of bobby calves. Voiceless recommends an alternative or improved transport system instead of resorting to blunt trauma. Bobby calves are predisposed to difficulties coping with transport and handling due to their physiological immaturity, low fat reserves and undeveloped abilities to regulate body temperature.<sup>24</sup>
- 2.10 There is abundant evidence to show the increased mortality rates of transported calves in comparison to those who remain on the farm.<sup>25</sup> This is compounded by the increased incidence of morbidity once the calves arrive at feedlot destinations.<sup>26</sup> Further, it is widely documented that plasma cortisol levels, which indicate stress, are elevated in calves in response to transport.<sup>27</sup> One study notes "*there is more potential for transportation to adversely affect the welfare of a calf than a mature animal because of the incomplete development of the hypothalamic pituitary axis combined with the fact that calves are exposed to a multitude of novel and stressful events, including weaning, processing, handling...*"<sup>28</sup>
- 2.11 If bobby calves must be transported, the relevant standards must be improved.

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<sup>23</sup> Standing Council on Primary Industries, Australian Animal Welfare Standards and Guidelines: Land Transport of Livestock, Edition 1, Version 1.1, 2012, accessible at <<http://www.animalwelfarestandards.net.au/files/2011/02/Land-transport-of-livestock-Standards-and-Guidelines-Version-1.-1-21-September-2012.pdf>>, see GB4.19 and GB6.18 for example, accessed on 30 April 2014.

<sup>24</sup> Animal Health Australia, Proposed Amendment to the Land Transport of Livestock Standards (SB4.5) – Bobby Calves Time Off Feed Standard (Primary Industries Ministerial Council, 2011) 7.

<sup>25</sup> H.R Trunkfield and D.M Broom, 'The Welfare of Calves during Handling and Transport' (1990) Applied Animal Behaviour Science 28, 137.

<sup>26</sup> K.S Schwartzkopt-Genswein, L Faucitano, S Dadgar, P Shand, L.A Gonzalez and T.G Crowe, 'Road transport of cattle, swine and poultry in North America and its impact on animal welfare, carcass and meat quality: a review' (2012) Meat Science 92, 231.

<sup>27</sup> Ibid, n 25, 137.

<sup>28</sup> Ibid, n 26.

### 3. Comments on amended sections to the Code

#### Section 5.10, Calf Management

- 3.1 Voiceless supports the insertion of text into the introductory comments, in particular noting the phrase:

***“Blunt force trauma is not considered acceptable for the routine, planned humane destruction of unwanted calves.”***

- 3.2 Voiceless also supports one of the new proposed minimum standards:

***“(f) If contractors are used to carry out routine killing of calves, then these calves must be cared for as if they were to remain part of the herd until the contractor arrives.”***

- 3.3 Voiceless recommends additional components to the following two proposed minimum standards:

***“(c) Calves that are killed must be rapidly rendered insensible and remain in that state until death is confirmed.”***

As previously noted, the guidelines must call for an immediate second procedure in the event that calves are not instantaneously killed. There is evidence that killing methods are not consistently effective (see section 2 of this submission), and in reality there may be many instances where calves are not rendered insensible until the point of death. To protect calves from prolonged suffering, minimum standard (c) must further mandate a second procedure to rapidly render a calf insensible where the first method was ineffective.

***“(d) Persons undertaking euthanasia must be suitably trained and competent in the handling and killing of calves.”***

As previously indicated, there are a number of environmental factors that make exacting an effective, instantaneous kill using the blunt trauma method impossible. Accordingly, slaughterpersons must be highly trained in this use of this method before it is undertaken on a calf. The stipulated threshold – ‘suitable training and competence’ – is overly subjective. Voiceless respectfully submits that persons undertaking euthanasia must have formal training and be appropriately accredited / certified. Such a standard would necessitate the implementation of an official training and authorisation / accreditation scheme, with this scheme being expressly stipulated in the Code. Voiceless highly recommends such a procedure, as competence of persons responsible for euthanasia is essential to ensuring calf welfare.

- 3.4 Voiceless opposes the remaining proposed minimum standard and recommends it be omitted:

***“(e) Calves must not be killed by the use of blunt trauma except where necessary in an emergency, as referred to in section 6.4.”***



Blunt trauma must not be an accepted method of killing in any circumstance, even in emergency situations. As previously noted, research indicates that there are more humane means of slaughtering calves in emergency situations, including the use of firearms and captive bolt pistols.<sup>29</sup>

#### Section 6.4, Emergency Humane Destruction

3.5 Voiceless opposes the following insertion of text into the introductory comments and recommends omission:

***“Blunt force may only be used in an emergency situation where the suffering is such that an animal’s life must be ended as soon as possible, and none of the approved methods are readily available.”***

As outlined throughout this submission, blunt trauma is not an acceptable method of killing, even in emergency situations. As previously noted, research indicates that there are more humane means of slaughtering calves in emergency situations, including the use of firearms and captive-bolt pistols.<sup>30</sup>

3.6 In response to minimum standards (a) and (b), the same comments from paragraph 3.3 of this submission are applicable.

## 4. Australian context

4.1 As an Australian-based organisation, Voiceless would like to bring the Australian status quo to light as a matter of comparison for New Zealand.

4.2 *Model Code of Conduct (‘MCOP’)*<sup>31</sup>

The current MCOP does not explicitly address blunt trauma as a method of killing. The only references to slaughter of dairy calves are:

- (i) *“5.10.5 ...Calves which are intended for sale as bobby calves, and are not strong enough to meet the standards required by that trade, should be humanely euthanased as soon as possible (see section 9, Humane destruction of cattle) or kept until they are strong enough to meet those standards.”*
- (ii) *“5.11.6 Sick or injured calves must be treated appropriately or humanely destroyed. They must not be presented for transport, sale or slaughter.”*

Under section 9, blunt trauma is not mentioned as a method of humane destruction. From this clear omission, Voiceless infers that blunt trauma is not a method of humane destruction.

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<sup>29</sup> Ibid, n 20.

<sup>30</sup> Ibid, n 20.

<sup>31</sup> *Primary Industries Standing Committee, Model Code of Practice for the Welfare of Animals: Cattle, 2<sup>nd</sup> Ed., PISC Report 85.*

Further, a note under the heading 'Temporal method' refers to the use of firearms to kill calves and explains, "*captive-bolt pre-stunning in calves is recommended because an additional blood supply to the brain enables the animal to remain conscious for a considerable time after the throat is cut.*"<sup>32</sup> Voiceless would like to highlight the significance of this statement. If the use of a firearm in the temporal method is unable to guarantee rapid unconsciousness and death in calves, it can hardly be argued that an inferior method – the less direct and often flawed performance of blunt trauma – can be relied upon to provide a humane method of killing.

#### 4.3 Proposed Standards and Guidelines ('S&G')<sup>33</sup>

As previously noted, the S&G were drafted to address national inconsistencies in cattle care and management for all cattle farms in Australia, but are yet to be implemented.

Those sections of the S&G relevant to blunt trauma are:

- (i) "*G7.6 Weak or orphaned calves with very little chance of survival should be humanely killed.*"
- (ii) "*S11.5 A person killing a calf by a blow to the forehead must first ensure that the calf is less than 24 hours old.*"
- (iii) "*G11.1 Recommended methods of humane killing include...for calves – firearms or captive bolt.*"
- (iv) Further, a note under Figure 11.1 states that blunt trauma should use the frontal method position.<sup>34</sup>

It is important to note that the S&G do not actively recommend the use of blunt trauma to slaughter calves, but rather make conditional requirements that the method must only be used for calves less than 24 hours old. We note further Guideline 11.1, in which it is acknowledged that firearms or captive bolt is a recommended, more appropriate, means of slaughtering calves.

## 5. Further recommendations

### Semen Sexing

- 5.1 Voiceless supports the production of crossbred or sexed female calves to help overcome the great wastage of male calves in the dairy industry. The aim of sexed semen is to produce a calf of a specific sex by filtering the semen in such a way that only sperm carrying female

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<sup>32</sup> Ibid.

<sup>33</sup> *Australian Animal Welfare Standards and Guidelines: Cattle, 1<sup>st</sup> Ed., Public Consultation Version 1.0, 21 February 2013, Standing Council on Primary Industries.*

<sup>34</sup> Ibid.

chromosomes is used in artificial insemination.<sup>35</sup> This non-lethal practice will not only reduce the number of unwanted bobby calves sent to slaughter<sup>36</sup> but is also considered a great advantage for the dairy industry.<sup>37</sup>

5.2 As access to semen sexing technology is increasing, the market price for sexed semen has significantly reduced since its launch in 1999.<sup>38</sup> The technology is therefore becoming more profitable for dairy farmers<sup>39</sup> and is already being used by many producers to obtain better quality heifer calves.<sup>40</sup> Although results generally show fertility to be slightly lower than that of a normal straw of semen, excellent results have still been achieved.<sup>41</sup> Advantages of sexed semen include the ease of calving, the ability to breed more heifers from preferable genetics and a reduction in the number of bobby calves.<sup>42</sup> This is not only beneficial for the farmer but for the industry as a whole and significantly reduces the production of unwanted calves.

5.3 Sexed semen, therefore, has a number of positive effects for both animal welfare and the dairy industry, and will grow as confidence in the system increases.<sup>43</sup> Both the government and industry should look to investing in this technology to improve the industry and to eliminate the number of calves being sent to slaughter each year.

#### Comprehensive Approach to Inherent Welfare Issues

5.4 While NAWAC has not called for submissions on other matters of bobby calf welfare, Voiceless implores the Committee to address welfare concerns more comprehensively. Throughout Australia and the rest of the world, dairy production is occurring against a backdrop of heightened public interest in animal welfare. Consequently, dairy industry practices are being increasingly scrutinised.<sup>44</sup> It would be both prudent and more efficient to address multiple perennial matters of bobby calf treatment simultaneously, in order to fully address and improve welfare conditions. In light of this, Voiceless would like to briefly draw

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<sup>35</sup> John Elder, 'Semen Technology Wins No Bull Prize' *The Age* (online), 20 October 2013 <[www.theage.com.au/national/semens-technology-wins-no-bull-prize-20131019-2vtxu.html](http://www.theage.com.au/national/semens-technology-wins-no-bull-prize-20131019-2vtxu.html), accessed on 9 April 2014.

<sup>36</sup> *Ibid.*

<sup>37</sup> K Moore and W Thatcher, 'Major Advances Associated With Reproduction in Dairy Cattle, (2006) *Journal of Dairy Science* 89, 1260.

<sup>38</sup> Hugh Ratcliffe, 'The Role of Sexed Semen as a solution to excess male dairy calves, GENUS ABS – Calf Forum: The modern solution to the exports of calves: working in black and white, beyond calf exports stakeholders forum: a final report on progress, November 2013.

<sup>39</sup> *Ibid.*

<sup>40</sup> Albert De Vries, 'The Economics of Sexed Semen in Dairy Heifers and Cows' (2009) University of Florida, IFAS Extension.

<sup>41</sup> *Ibid.*, n 38.

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*

<sup>44</sup> A.D Fisher and J.R Webster, 'Dairy Cow Welfare: The role of Research and Development in Addressing Increasing Scrutiny' (2013) 53 *Animal Production Science*.

attention to two key welfare issues at hand: separation of calves from their mothers and the procedure of disbudding.

#### *Separation of cow and calf*

- 5.5 Studies reveal that the industry practice of separating dams and calves shortly after birth negatively impacts the psychological and physical welfare of both animals. A short time after birth the calf is removed to ensure that as much milk as possible is available for sale.<sup>45</sup> In doing this, the industry is taking advantage of the cow's ability to provide nourishment for her young, her ability to produce milk, simultaneously ignoring and frustrating her maternal instinct and desire to protect, nurture and care for her calf.<sup>46</sup> Even when separated from the calf shortly after calving, cows show a clear behavioural response, including an increase in vocalisations and activity, which in nature would serve to reunite the cow and her calf.<sup>47</sup> This is a serious welfare issue for both cow and calf but one that is largely overlooked by industry and regulators.

#### *Disbudding*

- 5.6 Calves are also subject to disbudding, supposedly to avoid the risk of injury to other calves and handlers. This is exercised in a variety of methods including the use of caustic chemicals or a hot iron to burn through the nerves and blood vessels that allow the horn to develop.<sup>48</sup> The procedure is completed without the use of any pain relief.<sup>49</sup> A research group in New Zealand used cortisol levels – a hormone found in the body of mammals that indicates levels of stress and pain – to measure pain caused by disbudding<sup>50</sup> and found that immediately following the procedure, cortisol levels significantly increased.<sup>51</sup> While they found that the use of local anaesthetic and analgesics significantly reduced levels of pain and stress, cortisol levels still remained high for several hours after the procedure indicating that the use of pain relief does not necessarily eliminate the pain and discomfort associated with the procedure.<sup>52</sup> Disbudding is a cruel and unnecessary practice and should not be permitted in any industry.

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<sup>45</sup> Webster, *Animal Welfare: Limping towards Eden* 145. 2005.

<sup>46</sup> OIE, World Organisation for Animal Health (2011) *Terrestrial Animal Health Code: Chapter 7.1 Introduction to the recommendations for animal welfare (Article 7.1.1)* Available at: <[http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre\\_1.7.1.htm](http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.7.1.htm).> Accessed 9 April, 2014.

<sup>47</sup> Marina A.G. von Keyserlingk, *Hormones and Behaviour*, 111 (2007).

<sup>48</sup> David Fraser, 'Understanding Animal Welfare', The 21<sup>st</sup> symposium of the Nordic Committee for Veterinary Scientific Cooperation (NKVet) Denmark 24-25 September 2007.

<sup>49</sup> *Ibid.*

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

## 6. Conclusion

- 6.1 Practices that were once deemed acceptable are now being re-evaluated in light of new research and changing attitudes. As a result, there is an unavoidable necessity to address the welfare concerns associated with the dairy industry. The treatment and commodification of calves is perhaps one of the most distressing areas of the dairy industry and an area that has successfully been kept out of public view.
- 6.2 Voiceless maintains that a more thorough and comprehensive reassessment of current husbandry techniques is necessary in order to improve welfare conditions for dairy calves. NAWAC must improve the Code in a more holistic manner. In particular, Voiceless supports a blanket ban on the use of blunt trauma and implores the industry and government to invest in research and development in order to resolve the mass slaughter of bobby calves in the dairy industry.