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To the National Animal Welfare Advisory Committee (**NAWAC**)

FEEDBACK ON THE CODE OF WELFARE FOR DAIRY CATTLE

1. The New Zealand Animal Law Association (**NZALA**) has been invited by NAWAC to provide views on the current Code of Welfare for Dairy Cattle (**Code**) in order to assist NAWAC with preparing a draft code for public consultation.
2. NZALA is grateful for the opportunity to be involved in this review, and we trust that our feedback below is of assistance. We look forward to being further involved as this review, and the reviews of the other codes of welfare, progress.
3. This feedback first provides general comments on the Code, highlights areas of particular concern in terms of inconsistency with the Animal Welfare Act 1999 (**Act**), and then then steps through each Part of the Code.

General Comments

Clarity and Detail

4. As a general comment, we consider that the Code is very vague, and that a lack of clarity and detail for many of the standards makes them difficult to follow and enforce.

Areas with no minimum standards

5. NZALA are concerned that, for a number of issues covered by the Code, the Code sets Recommended Best Practice (**RBP**) but not minimum standards (**MSs**). This includes Parts 5.2 (Floods, Storms and Droughts); 6.6 (Drying-off); 6.10 (Mothering Calves onto Cows); 6.11 (The Selection of Animals for Mating); 6.12 (Pregnancy Examinations); 7.1 (Inspection and Treatment); 7.2 (Lameness); and 8 (Quality Management).

Inconsistencies with the Act

6. NZALA has concerns that a number of standards set by the Code are, or may be, inconsistent with the Act. For this reason, NAWAC should give particular consideration to the following matters, and whether they should be the subject of recommendations made under section 183A(2) of the Act:

- inadequate provision for the expression of dairy cows' behavioural needs (e.g. lying down, playing, grooming, maternal behaviours and foraging to explore, consume and select feed);
- using stones for calf bedding;
- inadequate provisions relating to stocking density of dairy cattle (4.1);
- inadequate provision for managing the mixing of dairy cattle (4.2);
- lack of access to shelter in both summer and winter conditions (5.1);
- inadequate provision for extreme weather events on dairy farms (5.2);
- use of off-paddock facilities and lack of access to pasture compromising animal health and frustrating the behavioural needs of dairy cattle (5.4);
- permitting high (25 ppm) levels of ammonia;
- practices associated with winter-grazing;
- a lack of adequate limitations on the use of electric prodders on dairy cows (e.g. that they be applied for only very short durations, that multiple applications be adequately spaced and that use not continue to be used if the animal fails to respond) and no limitation on the use of goads on sensitive parts of the dairy cow, including the ears and nose (6.1);
- issues associated with restraint (e.g. in relation to the use of electroimmobilisation devices and tethering of dairy cattle) (6.3);
- inadequate provision for drying off in dairy cattle (6.6);
- ability of untrained operators to conduct pregnancy examinations and high rates of dystocia (6.7);
- lack of minimum standards preventing premature birthing induction in pregnant cows;
- permitting hot branding;
- inadequate provision for preventing lameness in dairy cattle, or other health issues such as metabolic disease, mastitis, Johne's disease and broken shoulders; and
- selective breeding of dairy cattle for high milk yield, which causes health issues.

Code Introduction

7. We note that the code indicates in its purpose that "*maintaining the welfare of dairy cattle requires experience, training and observance of high standards.*" However, there are no specific training requirements to become involved in the dairy industry, and courses that are offered can be as short as a couple of weeks. This gap should be addressed.

8. We also consider that it may be helpful for at least the Introduction to the Code to include references to relevant sections of the Act so that Code-users are directed to the statutory purposes the Code serves, and the statutory requirements it is required to meet.

Part 2: Stockmanship

9. As above, MS 1 should prescribe more specific training requirements.
10. We do not consider that a reference to "*common sense*" is appropriate, as it assumes that commonplace practices are appropriate from an animal welfare perspective, when this is not always the case.
11. Rather, the Code should direct that persons in charge of animals receive appropriate training, and expert assistance when dealing with situations that are outside of their expertise.

Part 3: Feed and Water

3.1 The Importance of Planning Feed Supply

12. MS 2 provides that where an falls below 3 on the body condition scale (**BCS**), urgent remedial action must be taken. We note that 2 on the BCS is considered "*emaciated*" and as such it is more appropriate that urgent remedial action must be taken when the body condition falls below 4, as opposed to 3.
13. The standard does not provide for remedial action to be taken where an animal's body condition goes to 9 or above, which is considered "*obese*". As such it is appropriate that urgent remedial action must be taken where body condition goes to 8 or above on the BCS.
14. Meagher *et al.* recognised that providing a variety of feed for dairy cattle facilitates exploratory behaviour for some members of the herd.¹ This should be acknowledged in the Code, either at MS 2 (Food) or MS 6 (Providing for Behavioural Needs).
15. The RBP point (d) under Part 3.1 should be amended to read "*Abrupt changes in diet are prohibited*", and made part of MS 2. It is clear from the Code that a sudden change of diet can be harmful to dairy cattle and as such it should not be permitted. This should be possible given the Code provides that farmers are required to plan ahead and have a store of feed for the herd, so there should not be a time where feed runs out suddenly.

3.2 The Importance of Feeding Newborn Calves

16. MS 3 provides that new-born calves must receive "*sufficient*" colostrum, which is vague in nature. The requirements in the existing RPB should be moved into MS 3, and form an obligation, rather than a discretionary option. This is appropriate given Part 3.2 of the Code details the importance of calves receiving colostrum and how it can affect their ability to fight

¹ RK Meagher, DM Weary, and M AG von Keyserlingk "Some like it varied: Individual differences in preference for feed variety in dairy heifers" (2017) 195 Applied Animal Behaviour Science, at 8 to 14.

disease. To make the administering of colostrum optional in any way places the welfare of the calves at severe risk.

3.3 *Hand Rearing Calves*

17. MS 4 provides that calves must be given suitable liquid feed until the rumen has developed sufficiently. This should be amended to provide a specific time e.g. six weeks, to ensure the rumen has developed in all cases to allow the calf to digest solid feed.
18. The RBP under Part 3.4 should be made part of MS 4. The health and welfare of calves should be paramount, and these practices are important for avoiding welfare issues.

3.4 *Water*

19. Part 3.4 of the Code provides that the adequate supply of water is "*critical*" to dairy cattle health and welfare. As such the RBP should be made part of MS No. 5. This would require farmers to clean troughs regularly, ensure water is palatable, ensure the water supply meets peak demand and monitor the water quality, all of which is crucial to the health of the cattle and should not be optional in any way.

Part 4: Behaviour

4.1 *Behavioural Needs for all Dairy Cattle*

General Comments

20. The Code requires amendment to ensure that it sets standards behavioural needs of cattle are met.
21. The introduction to Part 4 of the Code refers to the importance of providing for natural behaviours, which includes providing room to play for young animals. As such it should be a requirement for calves of all ages to be provided room to express this natural behaviour, as opposed to a single barn that is generally provided as a matter of practice for several of their first weeks of life.
22. The goal should be for the system to enable cattle to express their natural behaviours as much as possible, as that achieves the best wellbeing outcomes for cattle. The use of the term "*adapt*" suggests that the Code contemplates cattle changing their behaviour to meet the environment. Emphasis should be given to the point of minimising impact on the expression of natural behaviour.
23. The paragraph preceding MS 6 states that in all cases dairy cattle need to be able to perform a range of other behaviours such as grooming, playing, grazing, feeding, foraging to explore, select and consume feed, rumination and maternal behaviours (such as isolating cows for calving). The importance of these further behaviours is generally well accepted. However, these are not included as minimum standards in the code, effectively making them optional.
24. In MS 6, more examples or a more precise definition of "*appropriate social interactions*" would be useful, as this is not covered by the Example Indicators.

25. Also in MS 6, a benchmark should be given to define “*normal feeding behaviour*” (e.g. the behaviour expressed by cattle in pasture without area allowance restrictions).

Surfaces

26. The inadequacies of Part 4 include failing to require that cattle be provided with sufficiently soft surfaces to lie down for an adequate period each day and permitting cattle to be left standing on concrete or other hard surfaces for 12 to 14 hours a day, despite the impact this can have on the health of dairy cattle and the fact that this frustrates their behavioural need to lie down.
27. As Laven and Lawrence recognised, standing on hard surfaces such as this for prolonged durations can increase the incidence of sole ulcers and digital dermatitis, leading to lameness.²
28. The Introduction and RBP for Part 4.1 refer to “*suitable soft lying surfaces.*” Examples (both in pasture and in artificial environments) of these surfaces would be useful.
29. MS No. 6 should include the RBP for the standard as mandatory – to provide all cattle with space to lie and rest comfortably on a dry, clean and well-bedded soft surface at all times and not just “*under usual conditions*”.

Play

30. The importance of play for calves was recognised by NAWAC in its 2019 Report to accompany an amendment to the Code (**Report**) in relation to the surfaces on which calves may be kept, with NAWAC not wanting to encourage the use of stones as bedding material partly because this “*led to calves spending less time playing and showing a smaller repertoire of play behaviour.*”³
31. There is a reference to play at MS 9 in relation to off-paddock facilities under the example indicators and as a RBP. While NAWAC has expressly recognised the importance of play in relation to off-paddock facilities, it is still not included as a MS in the code. In addition, the practice of using stones for bedding in relation to calves is still an option permitted by the Code.
32. This should not be the case. The importance of play should be recognised in a MS, and the use of stones for bedding should not be permitted, so as to avoid limiting play.

2 RA Laven and KR Lawrence “An Evaluation of the Seasonality of Veterinary Treatments for Lameness in UK Dairy Cattle” (2006) 89(10) Journal of Dairy Science 3858.

3 National Animal Welfare Advisory Committee *Report to accompany an amendment to the code of welfare for dairy cattle* (Ministry for Primary Industries, 31 October 2019) [**Report**], at 3.

Grooming

33. NAWAC has acknowledged that grooming is an important behaviour for dairy cattle, which they are highly motivated to seek out, and which is thought to help rid them of mud, faeces, urine, insects and parasites (thereby reducing risk of disease).⁴ This includes self-grooming (such as licking, scratching with hind feet or horns and swatting with the tail), as well as scratching on objects to reach parts of the body that are otherwise inaccessible.⁵
34. Despite the importance of this behaviour it is not included as a behavioural need in MS 6 (Providing for Behavioural Needs) or even as an example indicator of MS 6 (although it is discussed in the introduction to this standard).
35. Within the context of off-paddock facilities, social grooming is included as an example indicator of the MS and it is RBP that cattle in off-paddock systems be provided with devices that promote grooming. However, providing for grooming is still not mandatory, despite it having an importance that means it should be.

Stocking Densities

36. While the importance of appropriate stocking densities is recognised throughout the Code, there are no provisions outlining what these should be in relation to dairy cattle.
37. NAWAC stated in its Report that:⁶

setting stocking densities for animals that can vary in size according to breed, age and productive stage (e.g. cows in calf may require more space than cows which are not gestating) has the potential for worse welfare outcomes for the cattle.
38. However, the Report does not articulate exactly *how* this could contribute to worse welfare outcomes for cattle and there does not seem to be any apparent reason why a calculation like the one used for determining the space required for pigs could not be used in relation to dairy cattle, to account for their variation in size.⁷
39. The failure to address stocking densities explicitly in the Code, thereby depriving farmers of clear guidance as to what is acceptable, may allow for a huge variety in stocking densities.
40. This is problematic as high stocking densities have a range of welfare implications for dairy cattle. For example, cows “*spend less time lying as stocking density increases*”⁸ and high stocking densities “*can lead to increased levels of aggression.*”⁹
41. DairyNZ have identified further issues with high stocking rates being reduced air quality; impaired vision and observation by staff; increased risk of spreading infectious diseases;

4 At 16.

5 Ibid.

6 National Animal Welfare Advisory Committee *Report to accompany an amendment to the code of welfare for dairy cattle* (Ministry for Primary Industries, 31 October 2019) at 15.

7 Code of Welfare (Pigs) 2018, MS No 6(c) at 12. This calculation is: Area (m²) per pig = 0.03 x liveweight^{0.67} (kg).

8 Report, at 7.

9 At 15.

impaired observation of heat detection; poor quality lying area; and impaired access to feed and water.¹⁰

4.2 *Mixing Dairy Cattle*

42. The introduction to Part 4.2 does not currently emphasise the need to minimise introduction of new cattle into a herd, so as to avoid increased aggression, and should emphasise this point.
43. The RBP under Part 4.2 also states that “*the introduction of new animals into the herd should not occur more frequently than is necessary*”. Examples should be given of what is “*necessary*” in the context of good animal welfare practice, so that it is clear that farmers should establish clear systems/processes which minimise introductions of new cattle.
44. Part 1.1 says that the Code applies to “*any bull brought onto the farm for the purpose of mating dairy heifers or cows or kept at a breeding centre*”, but the Code itself does not say anything about the management of bulls (particularly when they are running with cows) or mating procedures.
45. This should be resolved by setting minimum standards for these activities.

Part 5: The Physical Environment

5.1 *Shelter*

46. The Code does not currently require dairy cattle to be provided with shelter, which these animals need in both cold and hot conditions. That this issue continues to persist (as recognised by both MPI and NAWAC) evidences the inadequacy of the current minimum standards, which impose only a vague requirement on farmers to provide dairy cattle with the “*means to minimise the effects of adverse weather.*”
47. While a number of industry stakeholders are implementing reforms on-farm and promoting the use of shelter through their educational initiatives, the provision of shelter should be a MS in the code so as to ensure that it will be provided and the welfare of dairy cattle ensured.
48. Further RBP or MSs could also be included to assist with reducing heat and cold stress, including minimising time spent in the yard; the use of computerised collars to measure the temperature of dairy cattle; and clarification of what shade and shelter can mean. Contingency plans should also be mandatory, so as to better ensure animal welfare in extreme weather events such as floods, storms and droughts.
49. There should be stringent requirements on this e.g. shelter in each paddock, shelter when waiting for milking, adequate shelter for calves up to a certain age at all times.
50. MS 7 should also be amended to provide that all cattle at all times, including calves of all ages, must have access to shelter at all times.

10 Dairy NZ *Dairy cow housing* (Dairy NZ Limited and Ministry for Primary Industries, 2019) at 10.

51. Access to shelter on hot, rainy, cold, or windy days is important for dairy cows. Legrand *et al.* found that dairy cattle prefer pasture at night, and access to indoor housing during the day when temperature and humidity increase.¹¹ Krohn *et al.* reported a preference for pasture as the preferred lying place for dairy cows in summer, with cows preferring indoor straw housing with deep bedding during winter.¹²
52. Other studies have found that cattle will change location in response to their environment;¹³ that cattle prefer to use areas protected from wind in winter;¹⁴ and that in hot conditions cattle will seek shade.¹⁵
53. In the New Zealand context, research by Karin Schutz and others at AgResearch found that “*dairy cattle are highly motivated to use shade in warm weather and consider shade a valuable resource that they are willing to compete for.*”¹⁶ This research also found that shade use increases with higher air temperature and solar radiation; that the provision of shade in late lactation improves milk production; that shade use is more than twice as high when all cows could access the shade simultaneously; and notes that feedlots in Australia recommend that cows should have access to a minimum of 4m² of shade per cow.¹⁷
54. Shutz *et al.* confirmed these findings, adding that cows with access to shade had lower panting scores and respiration rates than cows with no shade and that the proportion of the herd using shade increased and the proportion of cows with high panting scores decreased when more shade was provided.¹⁸ West¹⁹ and Kendall *et al.*²⁰ confirmed that the provision of shade in high temperatures leads to an increase in milk production.
55. The Code does not adequately provide for these needs. It does not require shelter to be provided except in very limited circumstances (i.e. in relation to newborn calves and sick animals). That the Code does proscribe access to shelter is contrary to section 4(b) of the AWA, which includes adequate shelter in the definition of “*physical, health and behavioural needs*” in relation to animals.²¹

- 11 AL Legrand, MAG von Keyserlingk, and D.M. Weary “Preference and Usage of Pasture Versus Free-stall Housing by Lactating Dairy Cattle” (2009) 92 *Journal of Dairy Science* 3651.
- 12 CC Krohn, L Munksgaard and B Jonasen “Behaviour of dairy cows kept in extensive (loose housing/pasture) or intensive (tie stall) environments I. Experimental procedure, facilities, time budgets - diurnal and seasonal conditions” (1992) *Journal Applied Animal Behaviour Science* 34: 37 to 47 at 46.
- 13 I Redbo, A Ehrlemark, and P Redbo-Torstensson “Behavioural responses to climatic demands of dairy heifers housed outdoors” (2001) 81 *Can J Anim Sci* 9 to 15.
- 14 JM Beaver and BE Olson “Winter range use by cattle of different ages in southwestern Montana” (1997) 51 *Journal Applied Animal Behaviour Science* 1 to 13 and RL Senft and LR Rittenhouse “Factors influencing selection of resting sites by cattle on shortgrass steppe” (1985) 38 *J Range Manage* 295 to 299.
- 15 JK Blackshaw and AW Blackshaw “Heat stress in cattle and the effect of shade on production and behaviour: A review” (1994) 34 *Aust J Exp Agric* 285 to 295; and M Vandenhede, B Nicks, R Shehi, B Canart, I Dufrasne, R Biston, and P Lecomte “Use of a shelter by grazing fattening bulls: Effect of climatic factors” (1995) 60 *Anim Sci* 60: 81 to 85.
- 16 K Schütz “Heat Stress in Dairy Cattle” in *Welfare Pulse* (Ministry for Primary Industries, Issue 10, March 2012) at 10.
- 17 *Ibid.*
- 18 KE Schutz, NR Cox, and CB Tucker “A field study of the behavioural and physiological effects of varying amounts of shade for lactating cows at pasture” (2014) 97 *J Dairy Sci* 3599 to 3605.
- 19 JW West “Effects of Heat-Stress on Production in Dairy Cattle” (2003) 86 *J Dairy Sci* 2131 to 2144.
- 20 PE Kendall, PP Nielsen, JR Webster, GA Verkerk, RP Littlejohn, LR Matthews “The effects of providing shade to lactating dairy cows in a temperate climate” (2006) 103 *Livestock Science* 148 to 157.
- 21 *Animal Welfare Act 1999*, s 4(b).

56. MS 7, and the RBP, do not have a requirement to regularly monitor cattle for signs of weather exposure, and do not refer to minimising the time that dairy cattle spend in the yard, which is a key mechanism for reducing heat stress. No reference is made to the use of technologies such as computerised collars, which could be included as a RBP.
57. The Code also does not recognise that shade and shelter can mean multiple things. For example, shade could be provided by barns, sheds, or natural landscape features.
58. MPI has identified that shelter on farms is an outstanding issue that needs to be addressed,²² and the vague MS currently outlined in the Code has proved insufficient to ensure that dairy cattle have adequate access to shelter.
59. MS 7 states that “[a]ll classes of dairy cattle must be provided with the means to minimise the effects of adverse weather.” If not shelter (which is RBP), it is unclear what these “means” would be. Provision of shelter seems (to the layperson) to be a fairly fundamental requirement, and it is unclear why this does not meet the standard.
60. MS 7 also states that “[w]here animals develop health problems associated with exposure to adverse weather conditions, priority must be given to remedial action that will minimise the consequences of such exposure.” This does not do enough to protect cattle, and would be better expressed as “remedial action must be immediately taken that will minimise the consequences of such exposure.”
61. The General Information section of 5.1 states that “[s]tudies have shown that there is an increase in milk production in cows that have voluntary access to shade during hot days.” If that increase in milk production is a sign of improved health, then that link should be explained. If not, then the statement is not relevant in a welfare context.
- 5.2 *Floods, Storms, Droughts*
62. The RBP in Part 5.2 states that “[f]armers should make an assessment of the risks of their susceptibility to floods, storms and droughts and develop contingency plans for these events, if necessary.” Similarly, in areas prone to drought farmers should “have a plan in place that ensures stock feed requirements can be met before stock welfare is compromised.” It may be useful to outline a suggested process or template for carrying out this assessment (without being prescriptive), and to identify which are the main warning signs or factors to look out for.
63. Having no minimum standards relating to extreme weather events means that the Code does not require farmers to have contingency plans in relation to such events. This is in contrast to the recently introduced MS 9.

22 MW Fisher, W Stockwell, A Hastings, JIE Brannigan, CE Lyons, P Timmer-Arends “Barriers to the adoption of animal welfare standards: shelter on pastoral farms” (2019) 79 *New Zealand Journal of Animal Science and Production* 37 to 42 at 37. See also Mark Fisher “Trees, rocks and sail-cloths: expectations for, and barriers to, the provision of shelter on pastoral farms” in *Welfare Pulse* (Ministry for Primary Industries, Issue 25, July 2018) at 2 and 3; and John Hellström “Sustainable Intensification – an Oxymoron?” in *Welfare Pulse* (Ministry for Primary Industries, Issue 16, December 2013) at 10.

5.4 Off-Paddock Facilities

Surfaces

64. MS 9(c)(i) provides that where dairy cattle are kept in off-paddock facilities for more than 16 hours a day for more than three consecutive days, they must be provided with a “*well-drained lying area with a compressible soft surface or bedding.*”
65. This provision reflects the fact that concrete surfaces such as those typically found in off-paddock facilities discourage cows from lying down, and accounts for the importance of exhibiting this behaviour to cows.²³
66. However, the new standard actually relaxes the standard prescribed by its 2018 predecessor, which provided that where cows are kept on a concrete surface for *12 hours* or more per day for three consecutive days, they had to be given at least one full day on a suitable alternative surface.²⁴
67. The 2018 code also provided a further protection, by referring to the *kind* of surface on which dairy cattle may be kept, rather than referring simply to an off-paddock facility. Thus, it did not matter whether cows were kept on a concrete surface in an off-paddock facility or outside of one, the maximum time they could stand on such a surface before having a break was 12 hours for three consecutive days. The removal of this provision from the current code is difficult to reconcile with NAWAC’s previous recognition in the 2018 code that dairy cattle need to have access to soft surfaces for lying down:²⁵
68. Where harder surfaces, such as concrete or raceways, are used for periods of 12 hours or more each day for consecutive days, welfare will be compromised. Lameness, stiffness, agitated behaviour and weight loss are likely to occur.
69. However, as NAWAC recognised in its report, the science indicates that dairy cattle within an off-paddock environment are at a greater risk of experiencing such health issues than those raised in pastoral systems.²⁶
70. NAWAC has acknowledged “*cattle prefer pasture access under certain conditions and are motivated to access pasture.*”²⁷ However it considered that the scientific understanding of what motivates dairy cattle to access pasture is limited, and that this justified its approach in not requiring such access.
71. This reasoning is problematic, as even if our understanding of what motivates dairy cattle to access pasture is uncertain (because the science is limited), NAWAC should still take an approach that minimises harm and which is based on the purpose of the Act to meet the physical, health and behavioural needs of animals.

23 Report, at 2.

24 Code of Welfare (Dairy Cattle) 2018, Part 5.3, Recommended Best Practice.

25 At 14.

26 Report, at 17 and 18.

27 At 14.

72. The mere fact that dairy cattle have indicated a preference for pasture suggests that this could be associated with physical, health and/or behavioural need(s). At the very least, prolonged frustration of this preference can be expected to impede quality of life.

Ventilation

73. MS 9(a)(iv) provides “*If ammonia levels of 25 ppm or more are detected at animal level, immediate action must be taken to reduce ammonia levels.*” The RBP provides “*Ammonia levels should be maintained at less than 15 ppm.*” However, Herbut *et al.* identified levels higher than 20 ppm as harmful,²⁸ this is a level 20% below the mandatory MS.

74. It is also unclear how exactly ammonia on dairy farms is measured and whether farmers are actually measuring this on a regular basis. The code of welfare states in the ‘General Information’ section of MS 9.

As a guide, a level of 10-15ppm of ammonia in the air can be detected by smell and an ammonia at concentration above 25ppm will cause eye and nasal irritation in people. In general, if the level of noxious gases is uncomfortable to people, it will also be uncomfortable for cattle.

75. However, this is obviously not a precise means of measuring ammonia concentration. Additionally, the Code does not, but should, require farmers to measure this regularly or to document their measurements.

Winter Grazing

76. The Winter Grazing Taskforce identified numerous animal welfare issues associated with winter grazing, including poor hoof health leading to claw lesions and lameness; increased risk of mastitis; birthing in mud; reduced lying time and poor quality of lying and sleep; reduced ability to ruminate; malnutrition and underfeeding; dehydration; cold and heat stress; lack of choice for lying site, fodder choice and social interactions; negative social interactions at high density (e.g. competition for feed, water and lying spaces); nutritional or metabolic problems; injury caused by fencing and equipment including fractures and broken legs due to mud; dental problems; and death resulting from misadventure, exposure or acute metabolic incidents.²⁹

77. The Taskforce considered that, in relation to winter grazing, animals should never be giving birth on mud and that avoidable deaths in adverse weather events and mass mortality events on winter grazing systems should never happen.³⁰

78. Additionally, cows should always be able to lie down comfortably (on a soft dry substrate) for as long as they want; there should always be an ability to readily move animals to shelter/dry land in adverse weather before harm occurs; there should be continuous convenient access to fresh, clean water; and animals should always have access to an adequately balanced diet “*that keeps animals warm and doesn’t cause acute or chronic*

28 P Herbut, S Angrecka, “Ammonia concentrations in a free-stall dairy barn” (2014) 14 Ann Anim Sci, 153 to 166 citing Scottish Farm Buildings Investigation Unit, *Report of Working Group on Climatization of Animal Houses* (Aberdeen, Scotland, 1984) 72 at 29.

29 Winter Grazing Taskforce *Final report and recommendations: Improving Animal Welfare on Winter Grazing Systems* (Ministry for Primary Industries, November 2019) at 3.

30 At 6.

malnutrition or metabolic problems.” The Taskforce considered these actions to be “*absolute bottom lines*”.³¹

79. The Taskforce provided 11 recommendations to address this issue,³² including the need to:³³

lift standards of animal welfare outcomes in the codes of welfare and ensure specific standards are included to address known problems around food, water, mud, lying times (amount of lying and quality of lying) and shelter provision in relation to intensive winter grazing.

80. Further, the Taskforce recognised that current codes of welfare are:³⁴

not aligned with emerging scientific understandings of sentience. There are no enforceable regulations that directly address access to water, shelter and requirements for lying, depth of mud, and proper nutrition when winter grazing.

Part 6: Husbandry Practices

6.1 Behaviour and Stock Handling

81. For reasons of clarity, and to address the fact that ears and noses are sensitive areas on cattle, in MS 10 we recommend removing (ba) and changing (b) to the following:

(b) Dairy cattle must not be struck, or prodded with a goad, in sensitive areas, including the udder, anus, genitals, ears, nose or eyes.

82. The use of electric prodders should be much more closely regulated, including specifying a maximum voltage to ensure minimal pain to the animal, and requiring multiple applications to be spaced - in line with the recommendations of the Humane Slaughter Association.³⁵

83. The first sentence of RBP (d) is unclear. It could be interpreted as allowing the use of electric prodders on animals under 150kg if they are stubborn or recalcitrant.

84. We recommend changing the wording as follows, and incorporating this into MS10:

d) ~~Electric prodders should not be used to move dairy cattle that weigh over 150kg other than stubborn or recalcitrant animals~~ must not be used on dairy cattle that weight under 150kg. For dairy cattle that weigh over 150kg, electric prodders should

31 At 7.

32 These included recommendations to conduct further work in this area so as to understand and mitigate the long-term animal welfare consequences of this practice; to establish baselines in order to monitor progress of improvements; to utilise and expand on existing knowledge as regards barriers to improving animal welfare; to finalise a detailed whole-of-supply-chain process map; to identify gaps in information transfer; animal welfare being a part of farm planning alongside environmental management; MPI taking steps to implement change immediately as regards compliance and enforcement; participants in the supply chain identifying practical options to adapt support tools (e.g. contract templates including reference to animal welfare obligations); that key research projects should incorporate animal welfare performance measures; establishment of a pan-sector intensive winter grazing action group; and for MPI to lead a debrief of winter 2019 and assess progress against the Taskforce recommendations, for the Taskforce to report back to the Minister by 2020.

33 Winter Grazing Taskforce *Final report and recommendations: Improving Animal Welfare on Winter Grazing Systems* (Ministry for Primary Industries, November 2019) at 8.

34 At 5.

35 Humane Slaughter Association “Humane Handling of Livestock” (2016).

only be used to move those animals that are stubborn or recalcitrant. Electric prodders should not be applied for more than one second at any time. If the desired effect is not achieved after four or five attempts, their use should be discontinued.

85. We understand that other, less painful and dangerous methods can achieve the same effects as lifting or twisting animal tails, or pushing them with vehicles. Therefore, the following RBP guidelines should be edited as follows, and moved into MS 10:

- e) tails ~~should~~ must not be lifted or twisted.
- ...
- g) dairy cattle ~~should~~ must not be moved by being pushed with a vehicle.

6.2 *Driving*

86. Inserting the following sentence would provide helpful clarity for MS 11:

- (ba) Animals should be moved at such a pace where they can see where they are going and where to place their feet.

6.3 *Restraint*

87. It is highly problematic that cows may be tethered indefinitely and only inspected every 12 hours, and that electroimmobilisation devices may be used by those not fully conversant with safe operating procedures, particularly as the Code recognises that “[e]lectroimmobilisation devices do not block pain and may be aversive to animals. NAWAC has recommended that they be declared restricted devices.”³⁶

88. Electroimmobilisation devices are designed and used in order to prevent animals from exhibiting normal responses to pain. That is their purpose: to temporarily paralyse the animal in order to allow handlers to carry out painful husbandry procedures. Therefore, the reference to allowing animals to demonstrate “*normal responses to pain*” in MS 12(f) is contradictory.

89. The Australian RSPCA believes that electroimmobilisation is not justifiable on welfare grounds.³⁷ We recommend that the use of electroimmobilisation be prohibited, or at least have tighter restrictions around its use, for example, that they should only be used by veterinarians.

90. At a minimum, the RBP guidelines should be modified as follows, and incorporated into MS 12:

- a) Operators ~~should~~ must be fully conversant with, and follow, the safe operating procedures of restraint equipment, which should be maintained in good working order.
- b) Electroimmobilisation devices ~~should~~ must only be used on adult dairy cattle.

³⁶ Code of Welfare (Dairy Cattle) 2019 at 22.

³⁷ RSPCA Australia “What is electro-immobilisation and what impact does it have on animal welfare?” (8 October 2019) <<https://kb.rspca.org.au/knowledge-base/what-is-electro-immobilisation-and-what-impact-does-it-have-on-animal-welfare/>>.

91. If electroimmobilisation is to continue to be permitted under the Code, RBP should include that electroimmobilisation devices should be checked by a registered electrician at least once per year. MS 12 should in turn require that electroimmobilisation devices must not be used if found to be faulty.

6.4 *Identification*

92. Farmers are required to keep a register of all animal medications that come onto a farm. Therefore it is safe to assume that adequate levels of pain relief are administered to dairy cattle.
93. However, it should be stipulated *when* the pain relief should be given, and there should be guidance, or references to guidance, on how long it takes for pain relief to come into effect, or a requirement to ensure that pain relief has taken effect before undertaking hot branding or other painful procedures.
94. Therefore, MS 13 should be changed to:

Hot branding must not be used without first administering effective pain relief and allowing for sufficient time for it to come into effect.

95. MS 13 should be further added to state that animals must not be branded on sensitive areas, such as the head, and to prohibit the use of hot branding in situations where less painful methods of identification are suitable.
96. What is meant by “*competent operator*” should also be clarified, along with the training or skills that are required.

6.6 *Drying-off*

97. There is no MS for drying-off. We consider that the RBP should form a new MS.
98. Numerous recommendations relating to drying off in both scientific publications and by industry organisations such as DairyNZ have not been incorporated into the code, despite risks to dairy cattle health such as mastitis.

6.7 *Calving in Dairy Cattle*

99. It is important that care is taken with mating heifers as large calves can cause significant damage, and even result in the death of the heifer. Also, critical is the provision of dry ground and shelter, especially during calving. Therefore, we consider that the RBP guidelines for calving should be incorporated into MS 15, with an amendment to clause (a) as follows:

- (a) Dairy cows close to calving must be inspected at least twice every 24 hours once every 12 hours.

- (b) If during inspection of a cow or heifer calving is not proceeding normally, e.g. she is experiencing vigorous and regular abdominal straining without progress, remedial action must be taken.
- (c) A moving vehicle or any other instrument that does not allow for the immediate release of tension (including a motorised or mechanical winch) must not be used to provide traction to assist calving.
- (d) All inductions must be conducted under the direct supervision of a veterinarian.
- (e) Easy-calving sires must be selected for heifer mating as large calves can cause significant damage to small dams, particularly during their first calving.
- (f) Induced calving for non-therapeutic reasons must not be used.
- (g) Calving paddocks must provide dry ground, shelter and protection from adverse weather.
- (h) Those inexperienced in stock management must obtain immediate expert advice if they find a cow having difficulty calving. Heifers must not be left trying to calve for longer than 2 hours, and adult cows longer than 1 hour, before assistance is given or veterinary help sought (calving in this context means vigorous and regular abdominal straining).
- (i) To minimise the potential for damage to either cow or calf, controlled traction must only be used if the operator has diagnosed an unrestricted birth canal and the calf is in normal position for delivery. Where no progress is made after 5 minutes of controlled traction, veterinary advice must be sought.

100. Inspecting dairy cows close to calving at least once every 6 hours should be RFB.

101. The Code should include as a MS the requirement that inductions not be undertaken to manipulate calving patterns, and may only be used to treat particular health problems in individuals.

102. Calving in dairy cattle does not need to be inspected by a trained and competent operator; the issue of dystocia (the slow and/or difficult birthing of a calf to a cow) is not addressed in the code but is prevalent in calving dairy cows; and induction is technically permitted by the code, despite the now well-recognised welfare issues associated with this.

6.8 *Caring for Recumbent Cows*

103. We consider that the welfare implications of cows being unable to stand justify editing the following RBP as follows, and incorporating them into MS 16:

- a) Any cow that is unable to stand ~~should~~ must receive veterinary attention within 48 hours of becoming recumbent or be destroyed humanely...
- ...
- c) Cows that are unable to stand ~~should~~ must be kept on soft ground.

6.9 *Calf Management*

104. As raised above in relation to the branding of dairy cattle, the standard of competency required for handling and killing calves should be set out and specified.

105. Despite new regulations being promulgated in recent years, there are still major unaddressed welfare issues pertaining to bobby calves. They are separated from their mothers almost immediately after birth, leading to stress for both mother and calf; millions of

these animals are slaughtered every year as a “waste product” of the dairy industry; and many of these calves do not appear to be fit prior to being slaughtered (despite this being a requirement of the regulations), with a 2016 study finding a 20% prevalence among bobby calves of dehydration, faecal soiling, increased respiratory rate and ocular and/or nasal discharge.³⁸

6.11 *The Selection of Animals for Mating*

106. This section covers the use of bulls where artificial breeding has not resulted in a pregnancy. There is no MS under this section and we consider that the RBP should form a MS.
107. The code of welfare does not specifically address the issue of selectively breeding dairy cattle in order to maximise milk yield and the health impacts of this.
108. Oltenacu and Broom noted that an increase in production leads to concerns regarding fertility; increased leg and metabolic problems; and declining longevity.³⁹ Ingvarsten *et al.* found an association between increased milk yield and an increased incidence of lameness, mastitis, ovarian cysts and ketosis.⁴⁰
109. In its 2017 report on selective breeding, NAWAC encouraged selecting for polledness (the state of being born hornless) in order to avoid having to disbud and dehorn dairy cattle (and the pain associated with these procedures), noting that this is not currently a priority in the industry due to “compromises in genetic gain elsewhere.”⁴¹ Other issues included genetically selecting cows for higher longevity within the context of indoor systems and higher production; ensuring that animal genotype is appropriate for its environment; that care should be taken in using easy to calve bulls born to dairy cattle; and the potential danger of extensively using a popular sire.⁴² None of these issues are addressed in the Code.

6.12 *Pregnancy Examinations*

110. There is reference to “*trained and competent operators*” but no guidance as to what is required in order for someone to be considered trained and competent at pregnancy examinations.
111. The Introduction states that:

When manually examining the reproductive tract per rectum, or using ultrasound by the transrectal approach, there is potential for rectal perforation that can compromise welfare and cause death.

38 Alana Boulton et al. *Bobby Calf Welfare Across the Supply Chain – Final Report for Year 1* (Ministry for Primary Industries, MPI Discussion Technical Paper No: 2018/44, July 2018) at 111.

39 PA Oltenacu and DM Broom “The impact of genetic selection for increased milk yield on the welfare of dairy cows” (2010) 19 *Anim. Welfare* 39 at 39.

40 KL Ingvarsten, RJ Dewhurst, NC Friggens “On the relationship between lactational performance and health: is it yield or metabolic imbalance that causes diseases in dairy cattle? A position paper” (2003) 83(2) *Livestock Prod Sci* 277 at 281.

41 National Animal Welfare Advisory Committee *NAWAC Opinion on animal welfare issues associated with selective breeding* (Ministry for Primary Industries, March 2017) at 8.

42 *Ibid.*

112. There is no minimum standard under this section and we recommend that potentially painful, and even lethal, examinations should have a MS. The RBP could form a MS provided there is some guidance or requirement set in relation to training and competency. The proposed minimum standard could read as follows:

- (a) Pregnancy examinations ~~should~~ must only be performed by trained and competent operators.

6.13 Painful Husbandry Procedures

113. Painful husbandry procedures such as disbudding, dehorning, castration and tail shortening are covered under the *Code of Welfare: Painful Husbandry Procedures*.

114. Regulation 53 of the Animal Welfare (Care and Procedures) Regulations 2018 allows for dairy cattle under the age of 6 months old to be castrated without using local anaesthetic. This is potentially problematic due to the pain that this procedure can cause.

115. Webster *et al.* examined the use of local anaesthesia on two- to three-month-old calves when castrated. The authors found that the use of certain anaesthetics reduced or eliminated the duration of cortisol response to castration; reduced crouching and postural shifts after surgical castration; and led to more feeding behaviour after castration.⁴³

116. A number of other studies have similarly found that anaesthesia does assist in reducing pain and stress when administered to calves prior to castration,⁴⁴ with Ballou *et al.* stating that calves should be administered with pain relief prior to performing this procedure.⁴⁵

117. The Code also permits the use of hot branding, although it specifies that this cannot be done without pain relief. However, the code does not specify what this pain relief should consist of (e.g. whether farmers should use analgesics to block pain, or local/general anaesthetic to block all sensation).

118. This is problematic given that it is well recognised hot branding is painful for cattle.⁴⁶ NAWAC has even recognised that hot branding may need to be addressed through the regulations

43 HB Webster, D Morin, V Jarrell, C Shipley, L Brown, A Green, R Wallace, PD Constable "Effects of local anaesthesia and flunixin meglumine on the acute cortisol response, behavior, and performance of young dairy calves undergoing surgical" (2013) 96 J Dairy Sci 6285 to 6300.

44 See, for example, KJ Stafford, DJ Mellor, SE Todd, RA Bruce, RN Ward "Effects of local anaesthesia or local anaesthesia plus a non-steroidal anti-inflammatory drug on the acute cortisol response of calves to five different methods of castration" (2002) 73 Research in Veterinary Science 61 to 70; JF Coetzee, R Gehring, J Tarus-Sang, DE Anderson "Effect of sub-anesthetic xylazine and ketamine ('ketamine stun') administered to calves immediately prior to castration" (2010) 37 Veterinary Anaesthesia and Analgesia 566 to 578; G Stilwell, MS Lima, DM Broom "Effects of nonsteroidal anti-inflammatory drugs on long-term pain in calves castrated by use of an external clamping technique following epidural anaesthesia" 69 American Journal of Veterinary Research 744 to 750; MA Ballou, MA Sutherland, TA Brooks, LE Hulbert, BL Davis, CJ Cobb "Administration of anesthetic and analgesic prevent the suppression of many leukocyte responses following surgical castration and physical dehorning" (2013) 151 Veterinary Immunology and Immunopathology 285 to 293; and D Van der Saag, P White, L Ingram, J Manning, P Windsor, P Thomson and S Lomax "Effects of Topical Anaesthetic and Buccal Meloxicam Treatments on Concurrent Castration and Dehorning of Beef Calves" (2018) 8 Animals 35.

45 Kevin Stafford *Animal Welfare in New Zealand* (New Zealand Society of Animal Production, 2013) at 49; and American Veterinary Medical Association *Literature Review on the Welfare Implications of Hot-Iron Branding and Its Alternatives* (April 4, 2011) at 2.

46 CB Tucker, EM Mintline, J Banuelos, KA Walker, B Hoar, A. Varga, D Drake, DM Weary, "Pain Sensitivity and healing of hot-iron cattle brands" (2014) 92 Journal of Animal Science 5674 at 5674.

route, noting that it is “currently allowed in codes, but there are alternatives, it could be considered outdated, and perhaps should be banned.”⁴⁷

119. In addition, NAWAC did not discuss the science behind including ear tagging and freeze branding in the code of welfare without requiring pain relief or anaesthetic, and did not discuss the science behind the pain relief required in relation to hot branding. Thus, these provisions are in need of review.
120. As a further, general comment, we consider that where pain relief is to be provided, that the Code should expressly stipulate that it must be given in a quantity that actually provides relief from pain.

6.14 Pre-transport Selection

121. The Code requires that all animals, including those destined for slaughter, be provided with the basic requirements of life and be spared unnecessary and unreasonable suffering. To be consistent with this objective, the following RBP should be edited as follows, and incorporated into MS 18:

- b) Collection areas ~~should~~ must provide adequate shelter and comfort for all animals, easy access for the person collecting them and facilitate efficient handling of the animals.

Part 7: Health

122. A range of health issues are not adequately addressed in the Code, including in relation to lameness, metabolic diseases, mastitis, Johne’s disease and broken shoulders.
123. The provision of adequate training to staff in relation to identifying and acting on lameness should be included as a MS, rather than as a RBP only.

Part 8: Quality Management

124. Overall this Part is highly vague and uncertain, and we consider it should impose at least some high level MSs for quality management, such as by making RBP (a) a MS.

125. RBP (c) states:

The quality assurance system should provide for all incidents resulting in significant sickness, injury or death of animals to be investigated and documented.

126. We suggest that if there is a situation where more than one cow has died (in what seems similar circumstances) then the quality assurance system should state that the report should be forwarded to the appropriate body, such as MPI, to explain what happened and how this can be avoided in the future. There’s not much point in sickness, injury or death being investigated if nothing is going to be done with the report.

47 National Animal Welfare Advisory Committee Minute “General Meeting” (11 March 2015) at [C 4].

127. RBP (c) goes on to state:

Where the results of an investigation may have implications for current industry management practices, a report outlining the incident and implications should be forwarded to the appropriate industry body for consideration.

128. We consider that it would be helpful to have further guidance, or examples of, what is meant by "*implications for current industry management practices*".

Conclusion

129. Having provided the above feedback, we look forward to continuing to work with NAWAC as it progresses its reviews of the Dairy Cattle Code, and the rest of the codes of welfare.

130. NZALA is particularly keen to help with consideration and addressing of the issues identified at paragraph 6, which involve concerns of inconsistency with the Act.

131. We are happy to provide further comments on any of the above, answer any questions, or discuss next steps in the review process.

Yours faithfully

The New Zealand Animal Law Association