

Ministry for Primary Industries
Manatū Ahu Matua



17 September 2019

Document Number: B19-0339

Proposed amendment to the Dairy Cattle Code of Welfare

Purpose:

To provide you with advice to inform your decision on whether or not to approve the National Animal Welfare Advisory Committee's (NAWAC) recommended amendments to the Animal Welfare: Dairy Cattle Code of Welfare 2018 (the code).

Minister	Action Required:	Minister's Deadline
Minister of Agriculture	<p>Note that NAWAC has reviewed the Dairy Cattle Code of Welfare and has recommended amendments to the code.</p> <p>Agree to provide a lead-in-time for Minimum Standards 9(c)(iii) and (iv), within the amendment, that relate to outdoor access for dairy cattle housed in off-paddock facilities.</p> <p>Agree to amend Minimum Standard 9(c)(i) to exclude calves to reflect NAWAC's intent for the management of calves.</p> <p>Agree to revoke the current code under section 76 of the Animal Welfare Act 1999.</p> <p>Agree to reissue the code, under section 75 of the Act, with all the proposed amendments except for Minimum Standards (c)(iii) and (iv) that relate to outdoor access requirements.</p>	By 30 September 2019 if you would like the amendment to be in force by 31 October 2019.

Contact for telephone discussion

	Name	Position	Work	Mobile
Responsible Manager	Privacy	Manager, Regulatory Reform & Animal Welfare Policy	Privacy	Privacy

Key Messages

1. On 17 June 2019, the National Animal Welfare Advisory Committee (NAWAC) recommended that you reissue the Dairy Cattle Code of Welfare 2018 (the code) with the proposed amendments under section 75 of the Animal Welfare Act 1999 (the Act).
2. The proposed amendments set out the behavioural requirements for dairy cattle in all situations and specific management practices for off-paddock facilities in the short and longer term. These amendments will support the future management of dairy cattle on-pasture, on-crop or in off-paddock facilities.
3. The Ministry for Primary Industries (MPI) considers that it is important to progress these amendments as soon as practicable as dairy cattle in off-paddock facilities are entirely reliant on farmers to meet their needs. In addition, these types of facilities are becoming more common for a number of reasons, including to meet environmental requirements.
4. NAWAC undertook public and targeted consultation on the proposed amendments. Key concerns raised related to the lack of access to pasture, grazing, and outdoor areas for dairy cattle in off-paddock facilities. NAWAC made a number of changes to the proposed amendments to address these concerns, including introducing a maximum period of time dairy cattle could be in an off-paddock facility without outdoor access.
5. NAWAC has advised that there are a small number of farms (less than 10) that currently house their dairy cattle permanently indoors. These farms will be affected by the proposed requirement to provide outdoor access. Of these farms:
 - approximately half are likely to need to make a substantial investment in order to provide for outdoor access;
 - some may require consents under the Building Act 2004 or Resource Management Act 1991, depending on the extent of change required; and
 - a number are known to have been affected by the *Mycoplasma bovis* (*M. bovis*) incursion and are unlikely to be able to make the necessary adaptations required to comply with the proposed changes in the short term.
6. MPI supports the amendments to the code and NAWAC's recommendation that you reissue the code. MPI also supports NAWAC's recommendation that:
 - the majority of the amendments to the code should come into effect as soon as practicable after the code is reissued; and
 - the amendments related to outdoor access for animals in permanent housing should be delayed in order to allow time for farms to comply with the new requirements.

7. If you agree to provide a lead-in-time for the amendments related to outdoor access, MPI will work with NAWAC to investigate options to allow time for farms to change practice to comply with the new outdoor access requirements. NAWAC recommends a lead in time of 12 months. Regulations may be necessary in order to enable such an appropriate lead-in-time.

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Recommendations

8. The Ministry for Primary Industries recommends that you:

a) **Note** that in 2010, the Minister responsible for animal welfare requested NAWAC, under section 78 of the Act, review the Dairy Cattle Code of Welfare 2018 (the code) to determine whether it adequately provided for long-term housing of dairy cattle.

Noted

b) **Note** that NAWAC has reviewed the Dairy Code of Welfare and has recommended amendments to the code.

Noted

c) **Note** that this briefing sets out the matters that NAWAC must have regard to, under section 73 of the Act, before making a recommendation to the Minister.

Noted

d) **Note** MPI's assessment that the proposed amendments to the code meet the requirements of the Act.

Noted

e) **Note** that the code is likely to have a substantial impact on a small number of farms that do not currently provide outdoor access for their dairy cattle.

Noted

f) **Note** NAWAC's recommendation that the amendments related to outdoor access for animals in off-paddock facilities do not come into effect immediately, but be delayed by 12 months, to allow farms time to comply with the new requirements.

Noted

g) **Agree** to provide a lead-in-time for the following minimum standards, within the amendment, that relate to outdoor access for dairy cattle housed in off-paddock facilities:

- Minimum Standard 9(c)(iii); and
- Minimum Standard 9(c)(iv).

Agree / Not Agree

h) **Agree** to amend Minimum Standard 9(c)(i) to exclude calves to reflect NAWAC's intent for the management of calves.

Agree / Not Agree

- i) **Note** that if you agree to recommendations g) and h):
- Minimum Standards 9(c)(iii) and (iv) will be removed from the code;
 - MPI will work with NAWAC to develop options to provide a lead-in-time for outdoor access requirements;
 - there will be minor consequential amendments to one recommended best practice and the introduction to the relevant section of the code related to 9(c)(iii) and (iv); and
 - Minimum Standard 9(c)(i) will be amended to exclude calves

Noted

- j) **Agree** to revoke the current code, under section 76 of the Act.

Agree / Not Agree

- k) **Agree** to reissue the code, under section 75 of the Act, with all proposed amendments except for Minimum Standards 9(c)(iii) and 9(c)(iv) that relate to outdoor access requirements.

Agreed/ Not Agreed

Grace Campbell-Macdonald
Director Biosecurity and Animal Welfare
Policy and Trade

Hon Damien O'Connor
Minister of Agriculture

/ / 2019

Executive summary

9. This briefing covers key issues associated with the proposed amendments to the code recommended by NAWAC. It provides information on matters that the Act requires you to consider before reissuing a code of welfare.
10. The amendments set minimum standards and recommended best practices for meeting the behavioural needs of dairy cattle and for keeping dairy cattle in off-paddock facilities in the short and longer term.
11. The original code, and the proposed amendments, apply to all dairy cattle and all persons responsible for the welfare of dairy cattle. The code does not apply to dairy cattle, once weaned and raised for beef production.
12. MPI has reviewed the proposed amendments and is satisfied the process that NAWAC followed for developing the proposed amendments was sound and that the proposed amendment complies with the requirements of the Act. This includes, but is not limited to, taking into account:
 - that the proposed standards are the minimum necessary to ensure the purposes of the Act will be met;
 - good practice and scientific knowledge;
 - submissions received during consultation;
 - available technology; and
 - that the recommendations for best practice are appropriate.
13. Public consultation indicated that while there was some support for the proposals, there were also concerns that the amendments did not go far enough to address the welfare needs of dairy cattle, in particular, that dairy cattle should not be permanently housed indoors.
14. As a result of public feedback and ongoing engagement with industry representative stakeholders, NAWAC made a number of changes to the proposed minimum standards and recommended best practices. Changes include requiring that dairy cattle that are held in any off-paddock facility for more than 150 days, in a 365-day period, must have daily or frequent access to pasture or a suitable outdoor area for the balance of the period.

Next steps

15. If you agree to reissue the code with the proposed amendments:
 - a draft letter to the Chair of NAWAC, and draft *Gazette* notice, are attached for your review in Appendices 1 and 2.
 - MPI will work with your office on whether you or NAWAC issue a media statement once the code is gazetted.
 - the code will come into effect 28 days after it is published in the *Gazette*. MPI will work with your office to ensure that the amendments come into effect before the end of October 2019.

16. If you agree to allow a lead-in-time for the requirements to provide outdoor access for off-paddock facilities, MPI will provide you with advice in December 2019 on how to put this into effect.

Background

Codes of welfare play an important role in New Zealand's animal welfare system

17. Codes of welfare are issued under the Act. A code of welfare sets minimum standards and recommended best practice for how people should care for the needs of their animals and meet their statutory obligations under the Act.
18. Codes of welfare can be used as an education tool and to support enforcement, whereby non-compliance with a minimum standard can be used as evidence to support prosecution under the Act.
19. Codes of welfare are developed by NAWAC, in accordance with the Act. NAWAC can then make a recommendation to the Minister, under section 74 of the Act, to issue a code of welfare. The Minister considers the recommendation and may issue or decline to issue the code, or refer the code back to NAWAC under section 75 of the Act. NAWAC may also undertake a review of a code of welfare under section 78 of the Act.
20. Codes of welfare can also be amended by regulations if more time is reasonably necessary to enable a transition from current practice to a practice that fully meets the obligations under section 10 of the Act. Section 10 sets out the obligations in relation to the physical, health and behavioural needs of an animal.

Why is the Dairy Cattle Code of Welfare being amended?

21. In 2010, the Minister responsible for animal welfare requested that NAWAC review the code, under section 78 of the Act, to determine whether it adequately provided for long-term housing of dairy cattle.
22. In 2011, NAWAC advised the Minister responsible for animal welfare that the code failed to fully address the behavioural and management requirements for animals in long-term housing situations. For example, the code did not address issues such as stocking density, effluent management, socialising needs, and access to outdoor areas.
23. On 17 June 2019, following a lengthy development process, NAWAC wrote to you recommending you reissue the code to include minimum standards and recommended best practices to help ensure good animal outcomes for dairy cattle.
24. A copy of the full list of proposed amendments to the code are attached in Appendix 3.

How were the amendments developed?

25. In 2013, NAWAC publicly consulted on a discussion document outlining proposed amendments to the code¹. The discussion document was developed with input from industry, and veterinary and scientific experts.
26. The proposed amendments included minimum standards and recommended best practices for meeting the behavioural needs of dairy cattle and for keeping dairy cattle in off-paddock facilities in the short and longer term. This included that dairy cattle must:
 - be able to lie and rest comfortably for sufficient periods each day;
 - be able to walk, turn around, lie in a natural position, lie down and rise freely, and express normal feeding behaviour and appropriate social interactions;
 - be provided with bedding material or a soft surface for lying; and
 - be able to separate themselves for calving.
27. Public consultation indicated that while there was some support for the proposals, there were also concerns that the amendments did not go far enough. See Appendix 4 for further information on comments raised during public consultation.
28. In general, submissions raised concerns for the health and welfare of dairy cattle kept in off-paddock facilities, including requirements for access to pasture, overstocking, high risks of mastitis, lameness and spread of disease. Submissions also raised concern that dairy cattle housed indoors are unable to express their normal patterns of behaviour, move freely, access fresh air and live a natural life.
29. As a result of feedback during public consultation, and ongoing engagement with industry stakeholders, a number of changes were made to the proposed amendment to the code. These changes include requiring dairy cattle that are kept in off-paddock facilities, for more than 150 days in a 365-day-period, be provided with daily or frequent access to pasture or a suitable outdoor area.

Who does the code apply to?

30. The original code, and the proposed amendments, apply to all persons responsible for the welfare of dairy cattle and to all dairy cattle including:
 - all calves born from dairy cows until weaning, wherever they are reared;
 - all dairy replacement stock, wherever they are being raised, and calves sent for slaughter;
 - dairy cattle that are kept as “house cows”; and
 - any bull brought onto the farm for the purpose of mating dairy heifers or cows, or kept at a breeding centre.

¹ NAWAC must publicly notify and consult on any review and/or amendments to codes of welfare as outlined under Part 5 of the Act.

31. The code does not apply to dairy cattle once weaned and raised for beef production.

Analysis

MPI supports NAWAC's amendments to the code

32. The amendments recommended by NAWAC support the future management of dairy cattle on-pasture, on-crop or in off-paddock facilities. The amendments set out the minimum standards and recommended best practices for meeting the behavioural needs of dairy cattle and for keeping dairy cattle in off-paddock facilities.
33. Off-paddock management facilities for dairy cattle are becoming increasingly more common in New Zealand. Reasons for their use include the need to change winter management systems to protect pasture, and improve feed utilisation and environmental management.
34. While there are animal welfare benefits to off-paddock facilities, there are a number of health and welfare risks if facilities are poorly designed or managed. Potential impacts include social stress, lameness, mastitis, and an inability to express normal behaviours such as lying down. Inadequate space, bedding and non-slip surfaces also pose risks to health, welfare and production outcomes.
35. MPI considers that it is important to progress the proposed amendments into the code sooner rather than later, for the following reasons:
- dairy cattle kept in off-paddock facilities are reliant entirely on the farmer to meet their needs and are at increased risk of experiencing negative animal welfare outcomes if their requirements are not met or managed properly;
 - off-paddock facilities for dairy cattle are becoming increasingly more common in New Zealand; and
 - there are a number of other Government initiatives underway that may impact how dairy cattle are managed and the extent to which off-paddock facilities are used and / or regulated. For example:
 - the *Essential Freshwater* initiative – aimed at addressing the impact of land use on water quality and ecosystem health, including considering issues around nitrogen leaching and winter grazing. Consultation was initiated in early September 2019; and
 - the winter grazing taskforce involving the veterinary community, industry and MPI – aimed at addressing animal welfare issues associated with winter grazing.
36. In developing the proposed amendment to the code, MPI considers that NAWAC has had regard to the matters it must consider when reissuing a code under the Act, including good practice and scientific knowledge. For further information refer to Appendix 5.

37. NAWAC has recognised that off-paddock facilities can have varying animal welfare impacts, both positive and negative. MPI considers that NAWAC has struck a balance between the benefits of off-paddock facilities, whilst ensuring there are sufficient protections in place to mitigate the main animal welfare risks to dairy cattle, that is, that animals can adequately express their natural behaviours.
38. MPI also supports NAWAC's approach that, where possible, the minimum standards should be outcome based. This recognises that there are a wide variety of off-paddock facilities and management systems and that there is more than one way to ensure good animal welfare outcomes. Outcome-based standards also recognise that management practices will need to adapt as animal needs will vary depending on breed, ages or stages of reproduction.
39. More information on how concerns raised through submissions are addressed, is outlined in Appendix 6.

MPI supports NAWAC's recommendations to provide a lead-in-time for farms to meet new outdoor access requirements for off-paddock facilities

40. NAWAC has advised that there are a small number of farms (less than 10) that are likely to be affected by the requirement to provide outdoor access to dairy cattle. NAWAC recommended that requirements that off-paddock facilities provide outdoor access not come into effect immediately. NAWAC has recommended a lead-in-time of 12 months.
41. MPI supports NAWAC's recommendation to provide a lead-in-time for new outdoor access requirements. A lead-in-time will help mitigate the impact of these new requirements and allow for the time necessary to change current practices and facilities.
42. Of those potentially affected, approximately half are likely to require substantial modification to current infrastructure to provide for outdoor access. The extent of modification required will depend on their current system but may include all or some of the following:
 - building a suitable outdoor area that has a compressible soft surface and is of sufficient size to allow dairy cattle to express a wide range of normal patterns of behaviour;
 - ensuring suitable fencing and infrastructure to allow for access to pasture access; and /or
 - changing current management systems to allow access to pasture if the animals have been in off-paddock facilities for more than 150 days in a 365-day period.
43. Depending on the proposed type of outdoor area (pasture or non-pasture), and the extent of any modifications, consents under the Building Act 2004 and/or the Resource Management Act 1991 may be required. This adds to the time it will take for a farmer to comply with these new requirements.

44. MPI is also aware that a number of the farmers that will need to update their off-paddock facilities to provide outdoor access, have also been affected by MBovis. The ability of these farms to adapt to additional requirements, while still recovering from MBovis, is likely to be limited in the short term.
45. If you agree to provide a lead-in-time for amendments related to outdoor access for off-paddock facilities:
- MPI will work with NAWAC to investigate options on how to put this into effect - where a substantial delay is required to transition to new requirements regulations may be appropriate;
 - MPI will provide you with advice in December 2019 - this timing will allow for any potential regulations to be considered by Cabinet and come into effect in early 2020;
 - the following minimum standards will be removed from the proposed amendments, and minor consequential amendments will be made to one recommended best practice and the relevant introductory section:
 - Minimum Standard 9(c)(iii): Where [dairy cattle are] held in any off-paddock facility for more than 150 days in a 365-day-period....they must have daily or frequent access to pasture or a suitable area for the balance of that period; and
 - Minimum Standard 9(c)(iv): A suitable outdoor area must have a compressible soft surface and be of sufficient size to allow dairy cattle to express a wide range of normal patterns of behaviour, in particular greater freedom of movement and social interaction to ensure Minimum Standard 6 [providing for behavioural needs] is satisfied.
 - an explanatory note will be included upfront in the code report indicating that NAWAC and MPI are working on options to give effect to a lead-in-time for the outdoor access requirements.
46. In the interim, MPI will work with stakeholders to raise awareness that new requirements related to providing outdoor access for off-paddock facilities are pending.
47. DairyNZ has also indicated it can support farmers to transition to the new requirements, as well as to new operators entering the industry, by:
- disseminating and raising awareness of substantial resources on DairyNZ's website on the design, construction and management of a variety of off-paddock facilities; and
 - re-establishing focus groups with farmers and others on off-paddock facilities.

MPI recommends that Minimum Standard 9(c) be amended to reflect NAWAC's intent for the management of calves

48. Minimum Standard 9(c) specifies that where dairy cattle are kept in off-paddock facilities for more than 16 hours a day for more than three consecutive days:
 - (i) they must be provided with a well-drained lying area with a compressible soft surface or bedding that is maintained to avoid manure accumulation, and artificial or natural shelter or other means of minimising the effects of exposure to the weather.
49. As drafted, Minimum Standard 9(c)(i) would include calves and would prevent calves being exclusively reared on a stone surface.
50. Following discussions with NAWAC, and review of the code and code report, MPI does not consider that NAWAC's intent was to include calves in Minimum Standard 9(c)(i) for the following reasons:
 - the general information that NAWAC included in the code notes that calves can be reared on a stone surface; and
 - NAWAC's advice in the code report recommended the inclusion of a recommended best practice, rather than a minimum standard, on this issue. Recommended best practices are included within codes to promote or encourage higher standards of care than is necessary to meet the obligations of the Act.
51. MPI therefore recommends excluding calves from Minimum Standard 9(c)(i). MPI considers this change to the code is minor because, as noted above, it reflects NAWAC's original intent in its advice to you for this minimum standard. Excluding calves from this minimum standard does not remove the requirement to provide shelter for calves that have been removed from their mothers. These shelter requirements are covered under Minimum Standard No. 6 – Shelter.

Next steps

52. If you decide to reissue the code with the proposed amendments:
 - a letter, for your signature, to NAWAC thanking the committee is attached as Appendix 1.
 - a *Gazette* notice, for your signature, is attached as Appendix 2.
 - the code will come into effect 28 days after it is notified in the *Gazette*.
 - MPI will work with your office to discuss whether you or NAWAC issue a media statement once the code is gazetted.
 - MPI will arrange, in conjunction with your office, for the code to be presented to the House within 16 sittings days of gazettal, as required by the Legislation Act 2012.
53. If you agree to allow a lead-in-time for the requirements to provide outdoor access for off-paddock facilities, MPI will provide you with advice in December 2019 on how to put this into effect.

Appendix One: Letter to NAWAC Chair

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Dr Gwyneth Verkerk
Chair
National Animal Welfare Advisory Committee
C/- Ministry for Primary Industries
P O Box 2526
WELLINGTON 6140

Dear Gwyneth

Thank you for NAWAC's letter on 17 June recommending the amendments to the Animal Welfare: Dairy Cattle Code of Welfare 1 October 2018 (the code) to me.

Having considered NAWAC's recommendation, I am satisfied that the proposed standards are the minimum necessary to ensure the purposes of the Animal Welfare Act 1999 (the Act) will be met, and that the recommendations for best practice are appropriate. I am also satisfied that the development of the code followed due process. I note that in making its recommendations, NAWAC has given attention to the matter specified in section 73 of the Act.

I plan to formally reissue the code, with the proposed amendments, by notice in the Gazette.

I note that the proposed amendments related to access to outdoor areas will not be included in the reissued code at this time. I understand that MPI will work with NAWAC on options to progress these amendments to allow farmers with sufficient time to change practices and build any required structures in order to meet those requirements. I have asked MPI to keep me informed on how this work is progressing.

I also note that minor changes to the code will be made to clarify that calves can be reared on a stone surface. I understand that NAWAC agrees with this change as it reflects the intent of its advice to me on the proposed amendments to the code.

Please thank the Committee for the work it has done on the amendments to the code.

Yours sincerely

Hon Damien O'Connor
Minister of Agriculture

Appendix Two: *Gazette* notice

A *Gazette* notice is provided on the following page for your signature.

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**Reissue of Code of Welfare: Dairy Cattle
(Notice No. MPI 1038)**

I hereby give notice that:

- Following a review under section 78 of the Animal Welfare Act 1999, the Animal Welfare: Dairy Code of Welfare is reissued under section 75 of the Act;
- The reissued code comes into force on 31 October 2019; and
- The Animal Welfare: Dairy Code of Welfare 2018 is revoked on 31 October 2019

The reissued code replaces the Animal Welfare: Dairy Cattle Code of Welfare 1 October 2018.

The reissued code is available for inspection free of charge from the Ministry for Primary Industries website, www.mpi.govt.nz, and for purchase at the following address:

- Animal Welfare Team, Agriculture and Investment Services, Ministry for Primary Industries, Charles Fergusson Building, 34-38 Bowen Street (PO Box 2526), Wellington.

Dated at Wellington this day of 2019.

Hon Damien O'Connor
Minister of Agriculture

Certified for signature

Solicitor
Legal Services
/ / 2019

Appendix Three: Proposed amendments to the Dairy Cattle Code of Welfare

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Part 4: Behaviour [new section]

4.1 Behavioural needs for all dairy cattle

Introduction

Provision for the behavioural needs of cattle is essential for their welfare, while understanding cattle behaviour is essential for stockmanship and animal husbandry. Dairy cattle are social and hierarchical animals. Social ranking is maintained by a range of behaviours, including subtle behaviours that might not be obvious to untrained observers. Normal patterns of behaviour vary with age and between cows and bulls. Some situations are more restrictive – either temporarily such as during yarding, during pasture feeding when the area allowance is small, as with pasture-based wintering, or for longer periods of time, for instance calves and cows in off-paddock facilities. In these situations, cattle need to be allowed to adapt to the system that is used, and need to be managed appropriately in facilities that are designed and constructed with the well-being of the animals in mind (see Section 5.4: Off-paddock facilities).

Lying is an important behavioural need for dairy cattle. It allows rest, and also rumination necessary for feed utilisation. When adult dairy cattle are well fed, have suitable soft lying surfaces and space available and are not exposed to adverse environmental conditions, they prefer to lie down for 10-12 hours each day. Welfare is compromised when lying is restricted and animals will compensate later when given a suitable lying area by resting in preference to feeding. The ability to lie is affected by stocking density as well as by the surface and nature of the lying area. Dairy cattle prefer and spend more time lying on soft, dry and clean surfaces and are reluctant to lie when the surface is hard, muddy, slippery and/or wet.

In all cases, whether being managed at pasture or on crop or in off-paddock facilities, dairy cattle need to have the room and environment to lie down, rise up and move around in comfort, and perform normal patterns of behaviour, including grooming themselves and each other, playing (especially for young animals), normal feeding behaviour such as grazing or feeding or foraging to explore, select and consume feed, rumination, lying to rest and maternal behaviours (particularly isolating for calving).

Minimum Standard No. 6 – Providing for Behavioural Needs
<p>(a) Dairy cattle must be able to walk, turn around, lie in a natural position, lie down and rise freely, and express normal feeding behaviour and appropriate social interactions.</p> <p>(b) Dairy cattle must be able to lie and rest comfortably for sufficient periods to meet their behavioural needs.</p>

Example Indicators for Minimum Standard No. 6 – Providing for Behavioural Needs

- Cattle do not show signs of lying deprivation, such as
 - choosing to lie down instead of grazing when back at the paddock after being stood off
 - excessive weight shifting between limbs, stiffness and/or lameness
 - appearing listless e.g. hanging of the head
- Normal free movement and access to feed and water is not impeded by space restrictions, excessive competition, slippery floors or poor construction.

- Stocking density, lying surface and area allocated for lying (including stall size) are sufficient for dairy cattle to lie in a normal posture.
- Stocking density and herd size are appropriate for the facilities, considering such aspects as the size and nature of the total area available, space along or around feeding and watering facilities, and floor and lying areas in off-paddock facilities, so that cattle can carry out normal behaviours.

Recommended Best Practice

- a) Under usual conditions cattle should be able to lie and rest comfortably on a dry, clean and well-bedded/soft surface for 10-12 hours a day to meet their behavioural needs.

General information

The minimum standards and information elsewhere in this code of welfare are intended to ensure that the behavioural needs of dairy cattle are met, and provide advice on how to meet those needs.

Time of day, environmental conditions and normal management patterns all affect dairy cattle behaviour. Monitoring at the same time each day (or during the same farm activity) allows observers to determine the animals' normal routines so that abnormalities can be picked up.

4.2 Mixing Dairy Cattle [moved from existing code Section 5.3]

Introduction

Dairy cattle live in groups in which they establish social hierarchies. Whenever animals are introduced into a herd, they will be challenged as newcomers and will have to establish their place in the group. These challenges can be aggressive and lead to injury and distress, and such behaviour needs to be managed. This is particularly important when first introducing heifers into a milking herd, and when cattle have horns.

Bulls are potentially dangerous at all times. Bulls need to be handled with special care and management skills to ensure their safety, the welfare of other animals and that of their handlers.

Recommended Best Practice

- a) Dairy cattle should be kept in stable social groupings as much as practicable and the introduction of new animals into the herd should not occur more frequently than is necessary, because of the social stress involved as the introduced and resident dairy cattle re-establish a hierarchy.
- b) When mixing groups of unfamiliar animals, or introducing new animals to a stable social group, or when releasing cattle from long periods spent in an off-paddock facility, animals should be observed until settled and monitored for signs of continuing aggression. Dairy cattle should be provided with sufficient area and with a non-slip surface, so that newcomers can move into free space if displaced or physically pushed or butted by the other animals.

5.4 Off-paddock Facilities [replacement section for 4.4 Stand-off areas and Feed Pads and 4.5 Housing Cows and Calves]

Introduction

An off-paddock facility is a facility that incorporates a constructed base, and may or may not have a roof or walls. Off-paddock facilities include calf sheds, purpose-built housing barns for cows, stand-off areas or pads (including long-term or wintering pads), and also feed pads. While kept in these facilities, animals are totally dependent on stock handlers for all their daily requirements, and farmers need to be aware there are additional responsibilities of care. Close monitoring and effective preventative and remedial action is particularly important for hygiene and disease management.

Adult dairy cattle may be held in off-paddock facilities for many reasons, but in particular for pasture and environmental management purposes, and to provide shelter. Dairy calves, both hand-reared and destined for early slaughter, are often housed to meet shelter requirements (refer to Section 5.1: Shelter).

The design and construction of the off-paddock facilities need to be carried out with the well-being of the animals in mind. Dairy cattle are likely to suffer significant discomfort or even injury, if structures, surfaces and stocking density are not appropriate. Resultant problems may include reduced lying times, reduced production, underfeeding, dirty udders and flanks, and increased health issues (such as enteric disease in calves and mastitis and lameness in cows). Calves in particular require accommodation that is dry, well ventilated and draught free.

Lactating cows have different requirements compared with dry cows and the facility may include provisions for milking, i.e. robotic milking systems. The design of the off-paddock facility and the way that it is managed both need to be appropriate.

The intention of the minimum standard below is that adult dairy cattle are not held permanently in any off-paddock facility for a large proportion of their lifetime. Situations arise where dairy cattle are managed in an off-paddock facility for longer than the traditional wintering period (i.e. more than 150 days), for example barn-housed robotic milking systems. There is evidence that cows managed in such circumstances will express a behavioural partial preference for having access to the outdoors, particularly at night-time. Daily or frequent access to the outdoors, either to pasture or a high quality area when the weather is suitable (i.e. does not create welfare risks such as hyper- or hypothermia or muddy paddocks) provides dairy cattle in these systems with opportunities to express a wider range of their normal patterns of behaviour. These include, but are not limited to, freedom of movement, choice of lying area, and opportunities for exploration, grazing and foraging, lying in extended positions and positive social interactions (refer to Section 4.1: Behavioural needs for all dairy cattle).

Minimum Standard No. 9 – Managing Dairy Cattle in Off-Paddock Facilities

- (a) All off-paddock facilities where dairy cattle are being kept must comply with the following:
- (i) Buildings and facilities for managing dairy cattle off-paddock, and all fittings and internal surfaces, including entry races and adjoining yards, must be designed, constructed and maintained so as not to cause injury and to meet the health and welfare needs of the dairy cattle.
 - (ii) Natural and/or artificial lighting levels must be at least 50lux during the light phase, for a minimum of nine continuous hours and a maximum of 18 hours each day, so that the dairy cattle can see each other and their surroundings.

- (iii) Natural or artificial ventilation must be sufficient to maintain temperature and humidity at levels that do not cause the dairy cattle heat or cold stress, that prevent direct draught onto animals and the build-up of harmful concentrations of dust or noxious gases.
- (iv) If ammonia levels of 25ppm or more are detected at animal level, immediate action must be taken to reduce ammonia levels.
- (v) Automated systems, including for feeding, water reticulation, cleaning and milking, must be checked daily and provisions must be made to safeguard animal welfare in case these systems fail.
- (vi) A contingency plan, containing fire prevention measures, emergency evacuation procedures, and pest and disease management plans, must be in place.
- (b) Dairy cattle kept in off-paddock facilities:
 - (i) must not be tethered.
 - (ii) must be inspected at least once a day and timely preventative or remedial action taken to address identified problems.
- (c) Where dairy cattle are kept in off-paddock facilities for more than 16 hours a day for more than three consecutive days
 - (i) They must be provided with a well-drained lying area with a compressible soft surface or bedding that is maintained to avoid manure accumulation, and artificial or natural shelter or other means of minimising the effects of exposure to the weather.
 - (ii) They must be trained or allowed to adapt to an off-paddock facility before being confined to it, and dairy cattle that do not adjust must be provided with alternative management.
 - (iii) Where held in any off-paddock facility for more than 150 days in a 365-day-period, from xxxx (12 months from amendment coming into effect) they must have daily or frequent access to pasture or a suitable outdoor area for the balance of that period.
 - (iv) A suitable outdoor area must have a compressible soft surface and be of sufficient size to allow dairy cattle to express a wide range of normal patterns of behaviour, in particular greater freedom of movement and social interaction, to ensure MS 6 is satisfied.
- (d) Where dairy cows are held in any off-paddock facility for more than 16 hours a day for more than three consecutive days, the following apply:
 - (i) The stocking density and facility design and management must allow dairy cows to separate themselves for calving, or they must be separated to another area for calving.
 - (ii) Calving areas must be clean, well-drained and have an anti-slip surface.
 - (iii) Dairy cows must be provided with clean and dry bedding, including, but not limited to, rubber matting or deep straw, when calving on hard surfaces or on slats.
 - (iv) Where free-stalls are provided within the off-paddock facility:
 - Stocking rate must allow a minimum of one free-stall per animal housed.
 - The design and size of the free-stalls must allow all dairy cows in the facility to lie without the body extending outside or overhanging the end of the free-stalls.
 - Dairy cows must not calve in free-stalls.

Example Indicators for Minimum Standard No. 9 – Managing Dairy Cattle in Off-paddock Facilities

- Cows are not seen resting outside of stalls as this indicates inadequate resting space.
- Cattle do not show behavioural signs of thermal stress, or aggressive and abnormal behaviour.
- Cows are seen to lie in extended positions.
- Cattle are distributed in the facility using it appropriately (e.g. lying in lying areas, standing in loafing/standing areas, and moving through alleyways).
- Cattle are able to access feed and water without undue competition.
- Cows close to calving have room to separate themselves from the herd, or they are separated before calving within sight of others.
- Cattle are acclimatised to the system.
- Cows are confident in their movement on walking surfaces and move freely without slipping.

- Positive social interactions, such as social grooming, can be seen.
- Calves can be seen to play.
- Cattle do not show signs of exposure to noxious gases (e.g. runny eyes or noses).
- Cattle do not have hock lesions or neck or wither rubs, indicating that facilities are appropriate for the size of the animals.
- Cattle are generally clean, in particular the flanks and udder.
- The incidence of lameness and mastitis is minimised.
- Calves are dry and do not show signs of thermal stress (e.g. shivering or panting).
- The facility design provides for all individual animals that will be managed in it (i.e. up to the largest animal in the facility).
- Surfaces are anti-slip and allow effluent to drain away or allow for effective effluent removal as necessary, e.g. by scrapers, and standing areas are covered with material that minimises lameness.
- There is provision to remove animals that do not adapt.
- In case of emergencies, provisions for automated systems, such as backup power supply or alternative management arrangements, are in place.
- Environmental control systems are monitored and maintained.
- Gas levels are managed to industry recommended limits.
- Remedial action is taken if cattle show signs of exposure to excessive heat, excessive cold or noxious gases.
- Light levels are at least 50 lux at the level of the animals, for at least nine hours per day.
- If bedding is used, it is good quality, with minimal risk of toxic agent contamination and, where relevant, it is friable (i.e. loose without clumps, or clumps easily broken up).
- Soiled bedding does not come into contact with dairy cattle to an extent that causes a problem for health and welfare; lying areas are cleaned by the removal of soiling and/or soiled bedding and/or replenishment with new clean bedding material.
- Staff are trained to implement emergency procedures.

Recommended Best Practice

- a) Dairy cattle should be held on a system that is designed and constructed for its intended use.
- b) Dairy cattle should be inspected twice daily.
- c) Bedding should be checked daily and topped up as required and free-stalls cleaned daily.
- d) Ammonia levels should be maintained at less than 15ppm. Hydrogen sulphide, which accumulates above stored manure, should be maintained at less than 10ppm.
- e) Where free-stalls are provided there should be 10% more free-stalls than animals housed.
- f) Free-stalls should be adjustable, or built to accommodate the largest animal (with manure management adjusted accordingly for smaller cattle), or stalls or separate pens of different sizes provided to accommodate animals of different ages, stages or with special requirements.
- g) Providing that weather and ground conditions are suitable, mature dairy cattle held in off-paddock facilities should be given daily voluntary access to pasture or to a suitable outdoor area as specified in Minimum Standard 9 c) iv).
- h) Cattle in off-paddock facilities should be provided with access to devices that promote grooming.
- i) Calves should be kept on compressible soft bedding that is dry and clean, prevents thermal stress and provides opportunity for calves to engage in play behaviour.
- j) Provisions should be in place to separate cows needing attention or to quarantine sick animals.
- k) Calving cows should be provided with a deep layer of clean and dry bedding.

General Information

Those considering off-paddock facilities should seek professional advice. Features to be aware of include:

- The facility should be easily accessible and situated in an area which can still be accessed in an adverse event.
- Siting and design features that affect ventilation, temperature and risk of natural emergencies.
- Position of feed troughs, the length, layout and number of troughs and the ease of filling.
- Water quality and water supply layout and allocation, including available length, layout and number of supply points and water flow rate.
- Physical dimensions and layout of different areas, including passageways (alleys, entrances, ramps etc), hospital pens and loafing/resting areas.
- Physical dimensions, design and layout of stalls, where these are used, including floor slope and use of different barrier rails and locators.
- Physical dimensions, material and features of other surfaces dairy cattle come into contact with, e.g. brisket bars, brisket locators, neck rails, stall and pen surrounds, and around feed troughs and water supply points.
- Flooring and surface material (e.g. concrete, substrate, non-slip treatments) and dimensions (e.g. slat width and gap between slats).
- Bedding material for loafing/resting and lying surfaces (including ongoing supply).
- Proposed stocking density including loafing/resting and lying areas and allocation of stalls and other discrete areas (e.g. pens), where these are used and with future expansion in mind.
- The transition between feeds, which needs to be carefully managed.

As a guide, a level of 10-15ppm of ammonia in the air can be detected by smell and an ammonia 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.

Stones (and sand) have been used as an alternative rearing substrate for calves due to availability and cost related to the purchase of other bedding substrates, and on the basis that, being biologically inert, stones (and sand) may assist with disease control. The long-term effect of rearing on stones has not been investigated, but calves kept on stones spend less time lying, are colder and play less than calves reared on other substrates. It is advisable to keep/rear calves on compressible soft bedding that is dry and clean; nevertheless, where stones are used, they should be smooth and rounded, and no larger than 40mm in diameter.

Industry and expert advice on design of and management of dairy cattle in off-paddock facilities to achieve good welfare outcomes can be sourced from DairyNZ, farm consultants and manufacturers of such facilities. Further information on different off-paddock facilities can be found in DairyNZ's good practice guidelines.

Schedule I – Interpretation and Definitions [additions]

free-stall

Individual bedding area (stall/cubicle/cow bed) in a barn providing an area for cows to rest, sleep and ruminate.

off-paddock facility

An enclosed area with a formed surface where dairy cattle are kept indoors or outdoors and are fully dependent on humans to provide for basic animal needs such as food, shelter and water. This term does not cover sacrifice paddocks (as defined below) or crop or pasture (including break-fed crop or pasture). Facilities covered by this definition include, but are not limited to,

- a) Free-stall barns (barns with solid flooring and individual bedding areas provided for lying and resting)
- b) Feed pads (defined above)
- c) Loose-housed barns (barns with a slatted floor or with a bedded pack floor or bedding material floor, including those used for calf rearing)
- d) Stand-off area (defined below)
- e) Wintering pad (defined below)

stand-off area (loafing pad)

An enclosure with a constructed base to keep animals confined so that they do not damage pasture over wider areas of the farm during wet weather conditions.

wintering pad or long-term pad

An enclosure with a constructed base to keep animals confined so that they do not damage pasture over wider areas of the farm during winter or wet weather conditions. Wintering or long-term pads are designed to hold cows for the entirety of winter as an alternative to wintering on a paddock.

Appendix Four: Additional information on public consultation

Summary

1. In total, the National Animal Welfare Advisory Committee (NAWAC) received 2,997 formal submissions (444 were individual submissions), including those from DairyNZ, Federated Farmers, Save Animals From Exploitation and World Animal Protection. A petition circulated by a member of the public provided 100 submissions while a further 2,453 submissions came from a standard letter.

Standard letter

2. The standard letter noted that:
 - the original proposal did not impose any limits around the length of time that dairy cattle may be confined indoors;
 - changes would threaten New Zealand's dairy export markets as it moves away from the image of the New Zealand dairy industry being predominantly pasture-based; and
 - the proposal allows unnecessary suffering and paves the way for factory farming in New Zealand.

Petition

3. The petition noted that:
 - respondents do not support allowing indoor confinement of dairy cattle for extended periods;
 - housing dairy cattle indoors for extended periods of time breached the Act which requires that animals be allowed to express normal behaviour, including grazing and roaming in herds; and
 - long term housing is not only harmful to an animal's welfare it is also harmful to New Zealand's reputation.

Individual submissions / animal welfare groups

4. There was some support in the public submissions for the shelter provisions outlined in the proposal, but support for the amendments were typically combined with concerns that dairy cattle need to be free to leave such shelter arrangements, have access to pasture, or that they should not be confined permanently to off-paddock housing facilities.
5. The consultation process also found that there was a general concern that the behavioural and physical needs of dairy cattle could not be met when housed in off-paddock facilities, specifically if animals were confined for prolonged periods.

Industry

6. Industry were generally supportive of the addition of new minimum standards on the behavioural needs of dairy cattle. However, it was noted that it was incorrect to imply that animals kept off pasture cannot display normal patterns of behaviour. It was also noted that it was impractical to require animals, not acclimated to grass, to have to have access to pasture as animals need time to transition between different types of feed.

Appendix Five: Process and statutory considerations for reissuing the Dairy Cattle Code of Welfare

1. Amendments to Codes of Welfare may be prepared by the Minister, the National Animal Welfare Advisory Committee (NAWAC) or any other person.
2. Before reissuing the Animal Welfare: Dairy Cattle Code of Welfare (the code), section 75 of the Animal Welfare Act 1999 (the Act) requires that the Minister considers NAWAC's recommendations after it has had regard to the matters specified in section 73 of the Act. Section 73 requires NAWAC to be satisfied that:
 - the proposed standards are the minimum necessary to ensure that the purposes of the Act will be met; and
 - the recommendations for best practice are appropriate.
3. In making its decision, NAWAC must have regard to:
 - any submissions received as part of its consultation process;
 - good practice and scientific knowledge in relation to the management of the animals to which the code relates;
 - available technology; and
 - any other matters considered relevant by NAWAC.
4. In making its decision, NAWAC may also take into account practicality and economic impact, if relevant.
5. MPI has reviewed the code with the amendment proposed by NAWAC and considers that NAWAC has given appropriate consideration to the matters that it must have regard to. MPI also considers that the proposed amendment and the process for its development are consistent with the requirements of the Act. MPI's assessment follows.

The proposed standards are the minimum necessary and the recommendations for best practice are appropriate

6. In codes of welfare, minimum standards establish what people must do in order to meet their obligations under the Act. If a person fails to comply with a minimum standard in a code, this may be used as prosecution evidence for an offence under the Act. Conversely, a person may defend a charge under the Act by demonstrating that they have met or exceeded a minimum standard. The code also sets out example indicators for each minimum standard, which assist people to determine whether they have met it. Example indicators do not have a legal effect.
7. The code includes recommended best practices. These recommendations promote and encourage a higher standard of care than the minimum necessary to meet an animal's needs. They do not have any legal effect. NAWAC recommends best practice based on its accumulated experience and consideration of scientific information and public submissions.

8. MPI is satisfied that the proposed standards are the minimum necessary, and the recommendations for best practice are appropriate.
9. MPI is also satisfied that, in coming to its decisions, NAWAC had careful regard to:
 - the public submissions received under section 71 of the Act and the consultation undertaken by the committee under section 72;
 - good practice and scientific knowledge in relation to the management of the animals to which the code relates;
 - available technology; and
 - other matters considered relevant by NAWAC.
10. A formal economic analysis of the impacts of the proposed amendment to the code was not undertaken. However, NAWAC did note that only a small number of farmers were likely to be substantially affected by the requirement for their farms to provide outdoor areas for their cattle for a certain period of time.
11. To help mitigate the impact of the new requirements, NAWAC proposed a 12 month lead-in-time for existing facilities to provide outdoor access.
12. MPI considers that a lead-in-time of at least 12 months is necessary given the extent of changes some farmers will need to make to comply with the new requirements and that some may have limited ability in the short term to make those changes as they have been affected by MBovis.

Development of the amendment to the code followed due process

13. In 2010, the Minister responsible for animal welfare requested NAWAC, under section 78 of the Act, review the code to determine whether it adequately provided for long-term housing of dairy cattle.
14. MPI considers that NAWAC followed due process in the development of the amendment to the code. Key points in the development process are presented below as evidence that this statutory requirement has been met.
15. The Act allows for any individual or organisation to draft a code of welfare. There have been several iterations of the draft amendment to ensure it complied with the Act, was clearly written, and that those likely to be affected by it had been consulted.
16. NAWAC publicly consulted on the draft amendment, with consultation closing in December 2013.
17. While acknowledging the length of time taken to develop the amendment to the code, MPI still considers that the amendment and the process for its development are consistent with the requirements of the Act for the following reasons:

- NAWAC publicly consulted on the proposed amendments—the code was publicly notified by notices in the major newspapers. It was sent to all major libraries and to specific interested groups;
 - NAWAC considered the submissions received², good practice and relevant scientific information, available technology, and other relevant matters in the development of the final proposed amendment; and
 - NAWAC undertook targeted engagement with industry representative stakeholders on the substantial modifications to the proposed amendments following public consultation.
18. Before finalising the proposed amendments to the code, it was peer reviewed by dairy cattle expert Associate Professor Jane Margerison, University of Nottingham, United Kingdom.
19. NAWAC recommended the final draft amendments to you on 17 June 2019.

² NAWAC received a total of 2,997 submissions during the public consultation period. Submitters' views are set out in Appendix 4 of this briefing.

Appendix Six: The Ministry for Primary Industries' (MPI) analysis of how the Dairy Cattle Code of Welfare (the code) addresses concerns raised in submissions

1. This analysis considers submissions made during public consultation, subsequent engagement with stakeholders, and the National Animal Welfare Advisory Committee's (NAWAC's) response. Where appropriate, relevant scientific knowledge, good practice and available technology are discussed in relation to the management of the specific issue. The specific areas raised by submissions were that:
 - there was no time limit specified on dairy cattle housed in off-paddock facilities;
 - dairy cattle in off-paddock facilities could not exhibit natural behaviours, including grazing; and
 - dairy cattle in off-paddock facilities are more prone to health problems, including disease, lameness and mastitis.
2. The below analysis addresses the key responses from the public submissions.

No time limit on dairy cattle housed in off-paddock facilities

Issue: That the proposals did not impose a limit on the time that dairy cattle could be housed in off-paddock facilities. Some suggested that dairy cattle should not be kept in off-paddock facilities and that use of such facilities were a breach of the Act. Others, including a form letter, asked for an additional amendment to include a maximum time limit.

NAWAC's response: NAWAC amended the code of welfare to include a minimum standard limiting the time that dairy cattle can be housed within an off-paddock facility. The minimum standard states that dairy cattle held in any off-paddock facility for more than 150 days, within a 365-day period, must have frequent or daily access to pasture, or a suitable outdoor area for the balance of that period³. This allows dairy cattle to be kept off-paddock during the main wet season (late autumn, winter and early spring).

MPI's analysis: MPI agrees with NAWAC's proposed amendment to limit the time dairy cattle can be housed in off-paddock facilities. MPI considers that a limit of 150 days within a 365-day period is logical and practical for farmers to achieve and provides dairy cattle managed in these systems with sufficient protections to ensure their welfare needs are met. This time period allows dairy cattle to be kept off-paddock during the main wet season, while at the same time ensuring that the animals are not prevented from accessing outdoor areas permanently.

NAWAC consulted industry representatives on an appropriate time limit for off-paddock facilities. The industry representatives consulted were generally supportive of the 150 day proposal.

³ NAWAC initially proposed amending the proposal to include a time period based on lactation length. This was amended to 150 days over a 365 day period due to feedback that lactation periods varied across industry and are not based on scientific evidence.

One stakeholder raised concerns that requiring frequent or daily access to a suitable outdoor area would make the robot milking systems within off-paddock facilities redundant as they are designed for fully housed systems. Following discussion with NAWAC, MPI does not consider that requiring outdoor access would make robot milking systems redundant. Robot milking systems can operate in both barn systems and full pasture based systems. MPI does acknowledge that the dairy cattle may need time to adjust to the modified environment but does not consider this is likely to be significant and that it is likely to be less than what is required when dairy cattle are first introduced to the robot milking system.

Dairy cattle are unable to express natural behaviours

Issue: That the lack of access to pasture, and no requirements for stocking density, in off-paddock facilities would significantly impact the ability of dairy cattle to express normal patterns of behaviour, including grazing, grooming, lying down, walking, socialising and accessing isolated areas during calving.

NAWAC's response: NAWAC did not modify the proposed amendment to the code to specifically require pasture or specify a particular stocking density, except to require one free-stall per animal. However, as noted above, NAWAC included additional standards that dairy cattle must have daily or frequent access to outdoor areas to either pasture or a suitable outdoor area if housed inside for greater than 150 days in a 365-day period. The amendment also requires that the outdoor areas must have a soft compressible surface and sufficient space that allows the animal to express a wide range of normal patterns of behaviour.

In addition, rather than including specific stocking density requirements, NAWAC notes that the amendment to the code already included minimum standards to ensure dairy cattle can express natural behaviours, such as being able to:

- lie and reset comfortably for sufficient periods each day;
- walk, turn around, lie in a natural position, and lie down and rise freely and express normal feeding behaviours and appropriate social interactions; and
- separate themselves for calving.

NAWAC actively considered whether access to pasture should be compulsory but decided not to include a minimum standard on this issue. Instead, NAWAC has included a recommended best practice that, where weather and ground conditions permit, all mature dairy cattle in off-paddock facilities be given daily voluntary access to pasture or a suitable outdoor area.

MPI's analysis: MPI agrees that the proposed amendment to the code of welfare ensures that there are sufficient protections in place to provide for the behavioural needs of dairy cattle in off-paddock facilities, including having access to outdoor areas and outcome based standards that relate to the provisions for behavioural needs. Requiring that dairy cattle must be able to express natural behaviours acts as a proxy to ensure appropriate stocking density. In other words, without appropriate stocking density, dairy cattle would be unable to display behaviours such as walking, turning around, lying in a natural position, lying down and rising freely, and/or expressing normal feeding behaviours.

It is clear that NAWAC has considered both the positive and negative impacts of requiring that dairy cattle in off-paddock facilities have access to pasture before deciding not to include a minimum standard on pasture access. NAWAC's decision was based on an assessment that while there are benefits to providing access to pasture, and that dairy cattle prefer pasture under certain conditions, there is limited information available about what aspects of pasture motivate dairy cattle to access pasture. In addition, NAWAC noted that there are potential negative impacts of requiring pasture for animals that are kept in off-paddock facilities including abrupt dietary changes, distances walked, social mixing and exposure to inclement weather conditions and muddy paddocks.

Disease management

Issue: That housed dairy cattle have more health problems than the equivalent animals kept on pasture.

NAWAC's response: NAWAC acknowledges the greater risk of disease spreading amongst housed animals. No additional amendments were made to the code as a result of this feedback.

The proposed amendment to the code of welfare already included a minimum standard requiring that a management plan, including contingency, and pest and disease management plans must be in place. In addition, the code requires that the facility has appropriate ventilation as this plays an important role in disease prevention when animals are kept at close quarters.

MPI's analysis: MPI agrees that planning is a key factor to managing and responding to disease management. MPI agrees with the proposed minimum standards address these issues.

Lameness and mastitis

Issue: That housed dairy cattle exhibited greater levels of lameness and mastitis than equivalent animals kept on pasture

NAWAC's response: To address specific concerns about lameness and mastitis, the amendment to the code now includes:

- a minimum standard that dairy cattle are provided with a well-drained lying area with a compressible surface or bedding that is maintained to avoid manure accumulation; and
- a recommended best practice that bedding should be checked daily and topped up as required.

MPI's analysis: MPI agrees with NAWAC's rationale for including additional standards to address concerns related to lameness and mastitis in off-paddock facilities. Lameness and mastitis occur in pasture based systems, as well off-paddock facilities pasture. However, access to pasture has been shown to have beneficial effects on dairy cattle leg and hoof health after long-term housing. As such, it is appropriate to place standards to support the management of lameness and mastitis in off-paddock facilities.

The minimum standard and recommended best practice will support the management of lameness and mastitis by keeping lying areas clean, reducing the number of pathogens and the incidence of mastitis and bacteria-induced lameness.

Proactively Released