

Chair
Cabinet Economic Development Committee

Review of the Dairy Herd Improvement Regulatory Regime

Proposal

1. I seek approval to initiate a review of the regulatory regime for dairy herd improvement and consult publicly on the attached terms of reference and draft consultation paper (see Appendix One and Two).

Executive Summary

2. The dairy herd improvement industry adds substantial value to the New Zealand economy by supporting continuous genetic gain across the national dairy herd. Genetic gain benefits individual farmers, the dairy industry and the economy in general by producing more productive animals. This in turn means better quality milk production using natural resources, improved animal health, and less impact on the environment.
3. The regulatory regime governing the dairy herd improvement sector is set out in Subpart 4 of the Dairy Industry Restructuring Act 2001 (DIRA), and Dairy Industry (Herd Testing and New Zealand Dairy Core Database) Regulations 2001 (the Regulations).
4. The DIRA and the Regulations provide for the collection of data, management and protection of the New Zealand Dairy Core Database (Core Database), control of access to core data, the certification of herd testers, and monitoring and reporting.
5. The regulatory regime has not been comprehensively reviewed since it was put in place. The regime would benefit from being updated to reflect changes in the herd improvement requirements of the dairy industry, for example, the current data requirements for animal evaluation are very prescriptive and limited in scope. I also wish to seek industry views on the effect of changing technology on the herd improvement sector and future implications of such technologies for the regulatory regime. Some key issues that it is timely to consider are:
 - how to ensure that the regulated ('core') dataset remains well aligned with the dairy industry's current and future animal evaluation needs and that access to industry-good data is provided in a way that supports the industry; and
 - clarity around the requirements for certification of herd testers.

6. In considering the regulatory regime, the aim is to provide dairy farmers, artificial breeding companies, researchers and others in the herd improvement industry with reasonable certainty of access to information, without creating barriers to competition and the development of new services by competing companies, and minimising compliance costs.
7. I intend to initiate a review of the regulatory regime for herd improvement and consult publicly on the basis of the attached terms of reference and draft consultation paper (see Appendix One and Two).

Background

Context for the review

8. On 7 May 2018 Cabinet agreed to terms of reference and a process for a review of the DIRA, and its impact on the dairy industry [Cab-18-MIN-0191]. That is focused specifically on Subpart 5 of the DIRA, which regulates the activities of Fonterra to ensure that the dairy industry operates in a way that protects the long-term interests of farmers, New Zealand consumers and the wider economy.
9. The DIRA also includes, in Subpart 4, separate statutory provisions relating to the dairy herd improvement sector. These are essentially stand-alone provisions, which do not directly interact with the Fonterra-related requirements in Subpart 5. They are supplemented by the Dairy Industry (Herd Testing and New Zealand Dairy Core Database) Regulations 2001 (the Regulations).
10. The DIRA herd improvement provisions and Regulations have not been comprehensively reviewed and updated since 2001, and aspects of the regulatory regime are no longer capable of supporting an effective and innovative herd improvement industry. I consider that a review and updating of the regulatory regime would be timely. This could be carried out in parallel with the review of Subpart 5 of the DIRA, and any amendments could be implemented in a comprehensive DIRA Amendment Bill.

The importance of herd improvement

11. The herd improvement industry underpins the performance of the New Zealand dairy industry. By promoting genetic gain across the national dairy herd, herd improvement delivers an estimated \$300 million to the New Zealand dairy industry annually. Over a 10-year period, the accumulated value of genetic improvement to an average dairy herd is estimated to be in excess of \$250,000.¹

¹ *Value of Genetic Improvement*, DairyNZ Technical Series Issue 22, July 2014.

12. Aside from its direct contribution to the economy, dairy herd improvement has the potential to support better environmental and animal health and welfare outcomes – for example, selecting animals that do not carry the gene for horns so that de-horning is not required, or animals who are likely to excrete less nitrogen, reducing the leaching of nitrogen into groundwater.

The herd improvement sector

13. Herd improvement involves a number of separate but inter-related activities:
- Herd testing: this involves the sampling and testing of milk for volume, fat content, protein content, and somatic cell count, to measure the performance of a cow. Around 70 percent of farmers use herd testing services. Farmers use herd test information to monitor the performance and health of their animals (e.g. to determine production and milk quality and to detect mastitis) and to aid their decisions around keeping, selling, drying off or culling stock. Farmers are not required by law to herd test, but data collected through herd testing must be provided by herd testing companies to the New Zealand Dairy Core Database (Core Database) for use in animal evaluation (see below).
 - Herd recording: this is the practice of keeping records on a dairy herd by specialised companies. It involves the generation and maintenance of wider herd-related data such as animal identification, calving, mating and ancestry details, and can incorporate herd testing information about an individual cow's production. Some herd recording data must be provided to the Core Database.
 - Animal evaluation: this involves ranking the best bulls and cows on the basis of their expected ability to breed profitable and efficient replacements. This is based on a number of indices derived from the data obtained from herd testing and herd recording. The development of key indices is undertaken by New Zealand Animal Evaluation Limited (NZAEL), a wholly owned subsidiary of DairyNZ². NZAEL ensures relevant on-farm data is captured, data quality is high, data is analysed accurately and that outputs are then applied in an appropriate manner.
 - Artificial breeding: there are several components to the artificial breeding market: the selection of breeding bulls and cows, sale of bull semen, and artificial insemination services administered by a technician.
14. There are currently two herd testing companies in New Zealand: Livestock Improvement Corporation (LIC) and CRV Ambreed. [REDACTED] The two companies are also the main providers of herd recording and artificial breeding services.

² DairyNZ is an industry-good body, whose purpose is to secure and enhance the profitability, sustainability and competitiveness of New Zealand dairy farming. It is funded via a levy on dairy farmers (currently 3.6 cents per kilogram of milk solids).

New Zealand Dairy Core Database

15. All of the above activities contribute to the breeding of more productive dairy animals. Herd improvement, both at the individual farm-level and across the national dairy herd, is critically dependent on the regular collection of and access to reliable, comprehensive data. New Zealand has had herd testing in place for more than a century, together with data sharing, initially through local, regional, and then national-level databases.
16. The current national system, managed by DairyNZ, involves two linked databases. The Core Database contains 46 fields of data, which herd testers are required by regulation to provide. The Core Database sits within the Dairy Industry-Good Animal Database (DIGAD), which contains a much wider range of data that is not regulated. Herd testing companies provide this additional data to the DIGAD voluntarily.
17. Together, the regulated and unregulated data comprising DIGAD make up the range of data required for animal evaluation and for research associated with herd improvement. The DIGAD contains information on over 35 million animals.
18. A statutory Access Panel is responsible for considering applications for access to core data, for example, for research purposes.

Comment

The regulatory regime

19. The DIRA and Regulations:
 - require herd testers (that is, providers of herd testing services on a commercial basis) to comply with the *New Zealand Standard: Dairy Herd Testing (NZS8100:2015)* and be certified by an independent certification body;
 - require herd testers to provide specific data to the Core Database;
 - provide for the management and ongoing maintenance of the Core Database, the manager's obligations, and mechanisms to protect the Core Database in the event that the manager does not or cannot meet those obligations;
 - establish an Access Panel to determine applications for access to data in the Core Database: the Access Panel must take into account the extent to which granting access to data will be for the benefit of the New Zealand dairy industry;
 - retain some residual requirements on LIC from its time as manager of the Core Database, regarding its corporate form as a shareholder co-operative; and
 - provide for the appointment of an independent certification body (currently TELARC).

20. As noted above, herd improvement is heavily reliant on data in order to inform herd management decisions at the individual farm level and to support genetic improvement at the national level. Because of the benefit that genetic gain provides to the industry and the economy as a whole, the regulatory regime focusses on the collection, quality and maintenance of data required by the industry. The regime aims to ensure that:
- there is a consistent, accurate and reliable supply of data contributed to the Core Database;
 - this data can be accessed (e.g. by researchers and companies seeking to innovate) for the benefit of the industry; and
 - farmers (and the wider industry) using the services of herd testing companies can be assured that these companies have the necessary technical and professional competence and resources to deliver accurate data for herd management purposes.

Objectives and process for the review

21. The purpose of the review is to ensure that the regulatory settings governing herd improvement:
- provide effectively for the provision of accurate, comprehensive and timely data for industry-good purposes now and in the future;
 - are well aligned with the needs of the industry;
 - take account of changes in technology; and
 - do not impose undue compliance costs.
22. The review will involve consultation with key herd improvement interests and the dairy industry (e.g. farmers, including Māori farmers), primarily on the basis of a discussion paper inviting submissions. It will also involve, as required, meetings with groups such as DairyNZ, LIC, CRV Ambreed, Breed Societies, Federated Farmers, TELARC, and equipment suppliers.
23. I propose that this review be run in parallel with the review of Subpart 5 of the DIRA (which will look at the contestability settings and requirements on Fonterra in Subpart 5, and the impact of Subpart 5 of the DIRA on the dairy industry).
24. I propose that consultation on the herd improvement regulatory regime would commence by early October 2018. I expect to report back to Cabinet on findings and policy recommendations in early 2019.
25. [REDACTED] While the dairy industry as a whole has an interest in herd improvement, the key stakeholders are different from those primarily interested in Subpart 5 of the DIRA. Accordingly, running the two reviews in parallel should not result in an undue burden on stakeholders.
26. A parallel process will also mean that the Government can introduce a single comprehensive DIRA Amendment Bill covering the key aspects of the regulatory regime.

Issues for review

27. The regulatory regime has not been comprehensively reviewed since its establishment in 2001, although there have been some limited updates to reflect changes in the industry in this time.
28. Summary details on key issues to be included in a review are set out below. Further detail is set out in the proposed terms of reference and discussion paper attached as Appendix One and Two.

The current requirements for provision of data to the Core Database are very prescriptive and limited in scope

29. The herd improvement industry is dynamic and innovative, with new developments that offer wider benefits than simply increased productivity. For example:
 - in 2017 CRV Ambreed offered bulls (LowN Sires) whose daughters are likely to excrete less nitrogen than usual, reducing the leaching of nitrogen into groundwater; and
 - productivity and animal welfare outcomes are supported by technology producing sexed semen. For example, a sorting process produces semen in which more than 90 percent of sperm cells in an artificial insemination straw carry the X chromosome, resulting more female offspring, and therefore significantly fewer lower-value bobby calves. In future it may be that high performing dairy animals are bred to be better beef animals, to diversify income for farmers, for example through breeding with Wagyu beef animals.
30. The current regulatory settings do not provide for the dairy industry to have reliable access to all of the data it will require for animal evaluation now and in the future, to support increased productivity and innovation.
31. Current regulation is narrowly focussed and prescriptive, requiring only that herd testers provide 46 data fields to the Core Database. This is only part of the data required for animal evaluation. The remainder relies on voluntary provision by herd testers.
32. In addition, the Regulations do not accommodate potential future changes in animal evaluation. Currently herd improvement relies primarily on phenotypic evaluation (how an animal looks and performs as a result of the interaction of its genetics and the environment). However, there is already some use of genomic information, primarily for the selection of bull calves for breeding purposes.
33. Genomic data is expected to make an increasingly important contribution to animal evaluation over time. Genomic data is not covered by regulation at present and is therefore not captured for industry-good purposes. Ideally, the regulatory regime should be made sufficiently flexible to be able to accommodate the contribution of genomic data if the industry requires it in the future.

34. The current, highly prescriptive regulatory approach is not responsive to changing conditions, as there is no mechanism for readily updating data requirements. I consider that more flexible regulatory mechanisms are required to future-proof the regime and avoid the need for ongoing amendment of regulations, which involves delays and administrative constraints.
35. Finally, the technology that enables the collection of herd testing data is changing. The majority of farmers who herd test at present use the services of a certified herd tester. However, some farmers are now using equipment that captures data concerning their cows as they are being milked (in line milk meters), without requiring a professional herd tester.
36. At present, the data collected by on-farm systems is not regulated and is not automatically provided to the Core Database.
37. Over time, as on-farm systems become more pervasive and accurate, it is possible that on-farm systems may start to displace the services of certified herd testers, resulting in a reduced amount of data going to the Core Database. In time, therefore, it may be necessary to change the scope of regulation to require persons other than certified herd testers to provide data to the Core Database. For example, given recent enhancements to on-farm biosecurity practice in light of *Mycoplasma bovis*, farmers may wish to reduce the number of people visiting their herds to limit the chance of contamination, and look at technological solutions to do so.
38. I feel that it would be helpful, in the context of the proposed review, to seek the views of the industry on this issue now, with a view to considering how changing technology might best be accommodated in the Regulations in the future.
39. In looking at the future data needs of the dairy industry, it would also be timely to consider:
 - the role, makeup and criteria governing the Access Panel; and
 - monitoring of access to, and use of, regulated data.
40. This would ensure that the arrangements around access to regulated data remains up to date and well aligned with any changes in the data requirements themselves.

Regulation of herd testers

41. The Regulations set out requirements relating to certified herd testers and processes relating to that certification. These requirements are to ensure that persons offering herd testing services on a commercial basis are properly qualified and have the necessary capability to ensure the quality of services to farmers and data being supplied to the Core Database.
42. The review will consider whether there are more effective ways to ensure data accuracy and professional quality, whether the current processes for appointing and monitoring certification bodies can be improved, and the balance between compliance costs and industry-good outcomes.

43. These regulatory requirements are being considered now as part of pro-active regulatory stewardship of this system and do not in themselves involve any new policy issues. However, it is important that the Regulations remain fit for purpose and can be administered efficiently.

Matters outside the scope of the review

Manager of the Core Database

44. In 2012 the dairy industry was consulted on changes to the management arrangements for the Core Database. The industry agreed that responsibility for the Core Database should be transferred from LIC to DairyNZ. This recognised that the management of an industry-good resource was more appropriately managed by an industry-good body.
45. In 2014 LIC undertook the necessary preliminary arrangements to transfer a copy of the Core Database to DairyNZ and the then Minister for Primary Industries notified in the Gazette that DairyNZ was now responsible for the Core Database.
46. The DIRA needs to be amended to recognise the change of Manager and to update associated obligations and safeguards. The necessary amendments were drafted and included in the DIRA Bill that was introduced in 2017, but subsequently withdrawn.
47. It is highly desirable that these amendments be progressed as Subpart 4 of the DIRA no longer reflects actual practice that has been in place since 2014. No further consultation is required on this issue, and I would propose to include these amendments in a DIRA Bill, along with any changes that arise as a result of this review.

LIC's statutory obligations

48. Subpart 4 of the DIRA retains some statutory obligations on LIC's corporate form, which were originally associated with LIC's role as Manager of the Core Database.
49. Cabinet decisions taken in 2014 considered that these obligations could be removed when the transfer of the Core Database was complete. Although LIC transferred a copy of the Core Database to DairyNZ in 2014, the completion of the transfer still required resolution of significant technical issues. No amendments to LIC's residual statutory obligations have yet been made.
50. I understand that the key technical issues are close to completion. I therefore propose to make recommendations on LIC's statutory obligations when I report back on the outcome of the review. As the dairy industry has already been consulted on this issue, I do not propose to undertake further consultation.

Consultation

51. The Ministry of Business, Innovation and Employment, the Treasury, the Ministry of Foreign Affairs and Trade and Te Puni Kōkiri have been consulted on the proposals in this paper. The Department of the Prime Minister and Cabinet has been informed.
52. Once approved for release by Cabinet, the Ministry for Primary Industries will inform key industry stakeholders about the scope of the review before the terms of reference are publically released.
53. Ministry for Primary Industries officials met with key industry stakeholders in June 2018 to discuss the potential for a review. All parties supported the need for a review, agreeing that it is timely to consider how this regime can more effectively support the performance of the industry into the future.

Financial Implications

54. There are no financial implications arising from this review.

Human Rights

55. There are no human rights implications from the proposals in this paper.

Legislative Implications

56. There are no legislative implications from the proposals in this paper. The implementation of the outcomes of the proposed review is likely to require legislative change.

Regulatory Impact Analysis

57. The Regulatory Quality Team at the Treasury has determined that the regulatory decisions sought in this paper are exempt from the requirement to provide an Impact Assessment as the relevant issues have been addressed in the discussion document.
58. The Ministry for Primary Industries' Regulatory Impact Analysis Panel has reviewed the attached discussion *document Dairy Herd Improvement Industry Review of Regulation* prepared by the Ministry for Primary Industries. The panel considers that the key policy issue in the document, namely the need to update and future-proof the New Zealand Dairy Core Database, incorporates the elements of the Regulatory Impact Analysis framework.

59. The document also highlights other aspects of the dairy herd improvement industry being considered now as part of pro-active regulatory stewardship of this system. These other matters are secondary to the main issue and have included the Regulatory Impact Analysis elements to a lesser extent. However, pro-active regulatory stewardship is encouraged and the document is well placed to receive stakeholder feedback on whether the current arrangements remain fit for purpose.

Publicity

60. The Ministry for Primary Industries will publish the terms of reference and a copy of this Cabinet paper on its website. I plan to release a media statement that outlines the review and opportunities for stakeholders to participate.

Recommendations

61. The Minister of Agriculture recommends that the Committee:

1. **Note** that on 7 May 2018 Cabinet agreed to terms of reference and a process for a review of Subpart 5 of the Dairy Industry Restructuring Act 2001 (DIRA), and its impact on the dairy industry [Cab-18-MIN-0191].
2. **Note** that Subpart 4 of the DIRA, which does not form part of the announced review, regulates dairy herd improvement, and requires substantial updating in order to continue to support the performance of the dairy industry.
3. **Agree** that a review of the herd improvement regulatory regime (Subpart 4 and associated Regulations) be undertaken in parallel with the review of Subpart 5.
4. **Agree** to the terms of reference for a review attached as Appendix One.
5. **Agree** that consultation on the herd improvement regulatory regime be undertaken with stakeholders on the basis of the consultation document attached as Appendix Two.
6. **Authorise** the Minister of Agriculture to approve minor amendments and refinements to the discussion document before it is released.

Authorised for Lodgement

Hon Damien O'Connor
Minister of Agriculture

Appendix One: Terms of reference for a review of the herd improvement regulatory regime

Background

1. The herd improvement industry adds substantial value to the New Zealand economy by supporting continuous genetic gain across the national dairy herd. Genetic gain benefits individual farmers, the dairy industry and the economy in general by producing more productive animals. This in turn means better quality milk production using natural resources, improved animal health, and less impact on the environment.
2. Genetic gain is achieved through the ongoing collection and use of data on the performance of cows and bulls. At the individual farm level this data informs decisions on herd management and breeding. At the industry level, such data is managed collectively for industry-good purposes and can be accessed for the purposes of research.

Regulatory regime

3. The sector is regulated by the Dairy Industry Restructuring Act 2001 (the DIRA) and the Dairy Industry Restructuring (Herd Testing and New Zealand Dairy Core Database) Regulations 2001 (the Regulations).
4. The regulatory regime deals with two main issues:
 - (i) management of the Core Database which is the repository of industry-good data; and
 - (ii) requirements that must be met by companies offering herd testing services and associated administrative provisions, to ensure the accuracy and quality of data used by farmers and the industry more generally.
5. The regulatory regime focusses on the industry-good aspects of herd improvement. The primary objective is to ensure that the dairy industry has access to reliable, accurate data that can be used for the benefit of the industry and, by extension, the New Zealand economy. Comprehensive, accurate and continuous data underpins herd improvement because it provides the basis and inputs for measuring the performance of cows and bulls for herd management and breeding purposes, and for developing new tools (e.g. breeding values) to support genetic gain.
6. The regulatory regime does not regulate the products derived from data, the ownership of intellectual property inherent in new products and tools, nor the commercial pricing of their use. These are subject to generic law (e.g. contracts and the Commerce Act 1986).
7. In 2014, following consultation with the industry, Cabinet agreed to amend the DIRA to enable the management of the Core Database to be transferred from Livestock Improvement Corporation (LIC) to DairyNZ. While DairyNZ has now assumed responsibility for managing the Core Database, the legislative amendments have yet to be made.

8. Consultation with the industry in 2014, and more recent discussions, indicated a number of other concerns in relation to the issue (i) above (management of herd improvement data), which have yet to be addressed. In addition, the regulatory regime governing requirements on herd testers (issue (ii) above) no longer appears fit for purpose in light of changing technology and industry practice. The “scope” section below outlines relevant issues.

Objectives of the review

9. The purpose of the review is to ensure that the regulatory settings governing herd improvement:
 - provide effectively for the contribution of accurate, comprehensive and timely data for industry-good purposes now and in the future;
 - are well aligned with the needs of the industry;
 - take account of changes in technology; and
 - do not impose undue compliance costs.

Issues and scope of proposed review

Management of herd improvement data.

10. Herd testing companies are required by law to provide prescribed data (46 fields) to the Core Database. However, a much larger set of data is provided to DairyNZ on a voluntary basis. Together, the prescribed and voluntarily provided data provide the necessary inputs for animal evaluation.
11. There are risks in relying on voluntary arrangements to ensure that much of the necessary data is provided. There are, however, also risks in relying on a highly prescriptive regime that specifies regulated data fields, as this can quickly be overtaken by technology and changing animal evaluation needs. There is a need to provide for a future-proof mechanism to enable the dairy industry to collect and access whatever data is required for animal evaluation now and in the future.
12. The review will consider how best to enable more flexibility and responsiveness in the regulatory regime to ensure that the provision of data keeps pace with technological change and industry needs over time.
13. In this context, issues to be considered may include, but are not limited to:
 - what data should be subject to regulation?;
 - who should be required to provide data to the Core Database? Currently this obligation is on certified herd testers;
 - what flexibility might be considered to accommodate changing technology and methods of data collection over time (e.g. increasing accuracy of in line milk meters and reduced reliance on commercial herd testing services)?; and

- what should DairyNZ's role be in relation to regulated data? DairyNZ is recognised in statute as the Manager of the Core Database. Should DairyNZ have a wider role in determining the scope and obligations on data provision?
14. It is also important that data can be accessed for research and development purposes, to promote innovation, develop new herd improvement tools and maximise the value of core data for the benefit of the dairy industry and the New Zealand economy. Access to data is currently governed by a statutory Access Panel which considers applications against statutory criteria. The review will consider whether the current arrangements for granting access to regulated data are optimal for promoting research and development for the benefit of the industry.
15. Issues for consideration may include, but are not limited to:
- the membership and role of the Access Panel.
 - the criteria against which applications are granted (or refused).
 - confidentiality of information – are the current settings appropriate?
 - terms of access to regulated data.
 - do current arrangements (administrative processes and charges) support or constrain innovation?

Regulation of herd testers and associated administrative arrangements.

16. Currently persons offering herd testing services must be certified by a certification body approved by the Director-General of the Ministry for Primary Industries and must comply with the *New Zealand Standard: Dairy Herd Testing (NZS8100:2015)*, which is incorporated into the Regulations by reference. The intent of these requirements is that farmers who purchase herd testing services can be assured that the service provider is professionally qualified and can meet consistent performance standards that will deliver reliable and accurate data to the client.
17. Regulation is considered necessary because herd testing is a technical service that relies on precision and competencies that cannot be readily verified by a client in the absence of formal certification.
18. The review will consider whether the current regulations are fit for purpose and most effectively support the ongoing improvement of the national dairy herd.
19. Issues for consideration may include, but are not limited to:
- are the current requirements for certification of herd testers appropriate, or are there more effective ways to ensure data accuracy and professional quality?
 - can the current processes and requirements relating to certification bodies be improved (for example, criteria for selection and appointment or re-appointment, monitoring of performance)?

- Are current requirements relating to certification and compliance cost-effective and do they effectively balance compliance costs against public policy/industry-good outcomes?
- What are the implications of changing technology for the current requirements?

Matters that are out of scope

20. The review will not consider:

- pricing of commercially-provided services and associated (non-regulated) data. The focus of the regulatory regime is on data that is managed for industry-good, as the key input to the development of new products and services, rather than on commercial property.
- management arrangements for the Core Database i.e. matters agreed in previous consultations regarding DairyNZ's role as manager, and which have yet to be given effect in statute.

Process

21. The review will involve consultation with key herd improvement interests and the wider dairy industry (e.g. farmers, including Māori farmers), primarily on the basis of a discussion paper inviting submissions. It will also involve, as required, meetings with groups such as DairyNZ, LIC, CRV Ambreed, Breed Societies, Federated Farmers, TELARC, and equipment suppliers.

Appendix Two: Draft discussion paper
