



The New Zealand Dairy Herd Improvement Industry

Consideration of Restrictions on Livestock Improvement Corporation

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1 Information for Submitters

Written submissions on the issues raised in this discussion paper are invited from all interested parties. The closing date for submissions is 23 May 2014, 5pm.

Submissions should be directed to:

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Submissions will be considered by officials in the preparation of advice to Ministers. Specific questions have been posed to submitters, but these are only suggestions. Submissions on all issues that are within the scope of this consultation document will be considered. Submissions backed by evidence and argument will carry more weight than statements of opinion.

1.1 POSTING AND RELEASE OF SUBMISSIONS

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The Privacy Act 1993 establishes certain principles with respect to the collection, use, and disclosure of information about individuals by various agencies including MPI. Any personal information you supply to MPI in the course of making a submission will be used by MPI only in conjunction with the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that MPI may publish.

2 Introduction

1. This section provides an overview of the current New Zealand dairy herd improvement industry structure, the review being undertaken and describes the scope of this discussion document.

2.1 BACKGROUND

2. The New Zealand dairy industry relies heavily on accurate information about dairy animal characteristics and their productivity. This information is used to select livestock for breeding and culling, and thereby informs market prices for stock. Genetic improvement of New Zealand's dairy herd has delivered significant economic benefits in the past, and there is ongoing scope for further benefits.
3. The productivity information of the national dairy herd is contained in the national dairy core database (the core database). The core database is currently held by a dairy farmer owned co-operative, Livestock Improvement Corporation. The database has been built up over many years including the period before 2001 when Livestock Improvement Corporation was part of the Dairy Board.
4. The collection and use of this information are subject to the requirements of the Dairy Industry Restructuring Act 2001 (the DIRA) and the Dairy Industry (Herd Testing and New Zealand Dairy Core Database) Regulations 2001 (the Regulations). In addition, the Act places certain obligations on Livestock Improvement Corporation. The following provisions of the Act and the Regulations are of interest here:
 - a. All relevant data collected from farms to be submitted to the database (clauses 7 and 8 of the Regulations).
 - b. That Livestock Improvement Corporation offer nationwide herd testing services at regionally uniform prices (clause 9 of the Regulations).
 - c. Requests for access to the data to be determined by an Access Panel with reference to industry good criteria (clauses 17 to 20 of the Regulations).
 - d. That Livestock Improvement Corporation obtain Ministerial approval for material changes to its co-operative structure (sections 51 and 52 of the Act).
5. Each contributing farmer's animal information is used to calculate a set of indices that summarise the value of particular animals in respect of production, breeding, suitability for once-a-day milking and other desirable characteristics. Many of these, such as the Production Worth and Breeding Worth indices are widely known and used in the industry. The information collected is valued by the industry because it is a rich resource that allows such indices to be created, leading to improved genetic gain in the national dairy herd.
6. This wide set of data is also used to undertake animal evaluation research, the purpose of which is to further refine the existing indices and to develop new measures from time to time.

7. Responsibility for holding the core database is to be transferred to DairyNZ in the near future. Some technical changes to the DIRA and the Regulations will be needed to support the transfer, but a number of restrictions on Livestock Improvement Corporation will remain irrespective of the transfer. These are considered to be related to Livestock Improvement Corporation's market position.

2.2 PURPOSE AND SCOPE OF THIS DOCUMENT

8. The purpose of this document is to consult on legislative restrictions imposed on Livestock Improvement Corporation because of its market position. These provisions in the Dairy Industry Restructuring Act 2001 and the Dairy Industry (Herd Testing and Dairy Core Database) Regulations are not affected by the transfer. The relevant provisions are that Livestock Improvement Corporation:
 - a. provide nationwide herd testing services at uniform prices within regions;
 - b. seek Ministerial consent for any changes to the Livestock Improvement Corporation constitution that put restrictions on who may hold shares, maximum voting rights and provides for postal voting; and
 - c. seek Ministerial consent for any application by Livestock Improvement Corporation to cancel its registration under the Co-operative Companies Act 1996 (to demutualise).
9. Livestock Improvement Corporation is requesting that all these requirements be removed.
10. In addition, a question has been raised as to whether Livestock Improvement Corporation's historic copy of the core database, and its future set of core data, should be subject to oversight by the access panel. This would mean that access to Livestock Improvement Corporation's core data would only be provided when it is not harmful to the interests of New Zealand dairy farmers. This oversight could be important if the requirement to obtain Ministerial consent to demutualise Livestock Improvement Corporation is removed.
11. This consultation process will help us determine whether it is appropriate to continue to regulate Livestock Improvement Corporation after the transfer and, if so, the nature of this regulation. The document outlines our initial assessment of the current and potential future dynamics of markets within the New Zealand dairy herd improvement industry. Your input is sought on the competition and industry good issues that currently exist or may arise in the dairy herd improvement industry markets.
12. Your input, combined with further competition analysis by the Ministry, will then contribute to the policy recommendations to be provided to the Minister for Primary Industries.
13. Please note: the consultation on the merits of transferring a copy of the database was consulted on in 2012, and therefore is not within the scope of this document.

2.3 WHAT ARE THE RELEVANT MARKETS AND SERVICES WITHIN THE NEW ZEALAND DAIRY HERD IMPROVEMENT INDUSTRY?

14. When considering competition issues in the New Zealand dairy herd improvement industry we propose to adopt the following market definitions:
- The New Zealand market for the provision of dairy herd recording and testing services (the herd testing market).
 - The New Zealand market for the provision of dairy cattle artificial breeding services (the artificial breeding market).
 - A market or markets for other goods or services that use the core database or derivatives from it (ancillary markets).
15. The herd testing market is the source of data inputs to the core database, and the key activities that generate the data are herd recording and herd testing. Firstly, the herd recording service involves holding and managing herd data for farmers, including the parentage of animals, birth and death dates, ID numbers, etc. Secondly, the herd testing service involves a tester¹ being present at milking time and recording the production volume, milk composition (fat, protein) and somatic cell count for each cow. Animal evaluation research uses data and indices from both of these information sources.
16. There are currently two firms competing in the herd testing market: Livestock Improvement Corporation and CRV Ambreed. Livestock Improvement Corporation has a much larger share of this market than CRV Ambreed. It is important that this market remain contestable, so that competitive pressure is exerted on the price of herd testing, which in turn leads to more herd testing and a richer database, as well as encouraging innovation.
17. The artificial breeding market as described above encompasses two different activities: the sale of bull semen and the artificial insemination service itself. The artificial breeding market already sustains more competitors than the herd testing market, including Livestock Improvement Corporation, CRV Ambreed and a number of other suppliers of bull semen. Certain outputs from the database, such as the Cow Breeding Worth index, are considered essential inputs for firms competing to supply artificial breeding services.
18. The ancillary market(s) include any other market for which database outputs are essential or important. For example, the Cow Breeding Worth index is widely cited in advertisements for livestock, so is an essential (informational) input into livestock markets. Veterinarians and dairy breed societies also use some database information to assist them in providing services to their clients/members.

Questions

- Do you agree with this way of describing the markets?
- Do you consider any of the existing indices to be essential information for firms competing in any of these markets? Why or why not?

¹ Some farms use automated milking systems (eg robots) which can also perform herd test functions. At present the resulting data is not included in the core database. DairyNZ has a project underway to investigate these issues.
http://www.dairynz.co.nz/page/pageid/2145878539/Current_projects.

3 Government's Objectives

19. This section sets out public policy objectives that will help guide government's consideration of different policy options.
20. Our main objective is to ensure that the New Zealand dairy industry is able to realise optimal genetic gain in the national dairy herd. This objective correlates strongly with the industry's National Breeding Objective which is to identify animals whose progeny will be the most "efficient converters of feed into farmer profit".
21. To achieve our main objective, it is important that government:
 - a. Ensures the Dairy Core Database is populated, maintained, and accessed for the overall benefit of the New Zealand dairy industry;
 - b. Encourages access to services at an efficient price;
 - c. Protects farmer interests;
 - d. Supports the operation of efficient markets; and
 - e. Encourages innovation.
22. The definition of the National Breeding Objective and its expression through indices has changed over time and will continue to change in the future. The future evolution of the data captured and the analysis carried out on that data is therefore seen as an important contributor to the overall development of the dairy industry.²
23. The Government also has an interest in promoting efficient and competitive markets on the basis that such markets are most likely to stimulate innovation and deliver economic benefits to New Zealanders. Government policy initiatives are often motivated by a desire to remove barriers to open competition.
24. The above Government objectives could be met through a number of different means, which may or may not involve regulatory intervention. Intervention by government can generally be justified when there is a problem or potential problem that is either unlikely to be solved in any other way, or is inefficient or ineffective to solve any other way.

² Review of the National Breeding Objective for the New Zealand dairy industry, NZ Animal Evaluation Limited, May 2012.

4 How we will identify and analyse options

25. In this section we set out a range of criteria to assist in assessing whether the relevant markets are likely to operate efficiently going forward, in the absence of the current regulatory requirements on Livestock Improvement Corporation to:
 - a. provide nationwide herd testing services at uniform prices within regions;
 - b. seek Ministerial consent for any changes to the Livestock Improvement Corporation constitution that put restrictions on who may hold shares, maximum voting rights and provides for postal voting; and
 - c. seek Ministerial consent for any application by Livestock Improvement Corporation to cancel its registration under the Co-operative Companies Act 1996 (for example, to demutualise).
26. We also consider whether the benefits to NZ dairy farmers could be jeopardised if Livestock Improvement Corporation's copy of the core database is not subjected to the same access requirements as that of DairyNZ's, given the absence of the requirements above.
27. The approach we will take uses a well-established method to assess whether policy interventions are warranted. This approach can be used to consider whether it is appropriate to continue to regulate Livestock Improvement Corporation after the transfer and, if so, the nature of this regulation.
28. Criteria that we will be using when considering the options include:
 - a. Whether Livestock Improvement Corporation is likely to hold market power in any of the relevant markets it operates in, and if so, the source of this market power.
 - b. If market power is identified in any of the relevant markets:
 - i. whether market power remains unchanged, diminishes or increases after the transfer of the copy of the core database to DairyNZ;
 - ii. whether there are alternative measures to be considered to address market power.
 - c. Whether there any other reasons (unrelated to LIC's potential market power) that may mean that current regulatory provisions should be retained.
 - d. Whether Livestock Improvement Corporation's corporate form or market power affects the need for Access Panel oversight of its historic copy of the core database, and its future set of core data.

5 Initial analysis and questions for submitters

29. In this section we offer some preliminary analysis to assist submitters as they consider their responses to the questions that we ask. None of the analysis should be construed as a settled or final opinion.
30. Much of the analysis in this section is based on a hypothesis that Livestock Improvement Corporation's requests are agreed to by the government. This assumption does not pre-judge the government's decision which is yet to be made. Its purpose is simply to allow us to carefully consider the scenario in which the requests are granted.

5.1 MARKET POWER

31. In competitive markets firms need to take careful notice of their customers and their competitors. Prices cannot be unilaterally raised without losing customers to a competitor. Conversely, a firm with market power is protected from these competitive forces and can therefore extract unusually large profits. Competition law in New Zealand makes it difficult to acquire substantial market power via a merger, and it is a breach of the Commerce Act 1986 for a firm that has market power to take advantage of that power for the purpose of lessening competition.
32. Market power can arise in several ways. It is possible that Livestock Improvement Corporation has or could get a degree of market power as a result of:
- a. Being a long-standing supplier in the herd testing and artificial breeding markets; and/or
 - b. Holding a larger set of animal data than any other supplier in the database, herd testing and artificial breeding markets; and/or
 - c. Establishing an intellectual property right over animal evaluation indices, particularly the Cow Breeding Worth index.
33. Livestock Improvement Corporation's share of the herd testing and artificial breeding markets is much larger than any other supplier in these markets. If there are barriers to entry or expansion in these markets, these large shares could by themselves be a source of market power.
34. Livestock Improvement Corporation holds all of the animal data that it gathered while it was part of the New Zealand Dairy Board prior to 2001, many more than the 46 regulated data-fields in the Dairy Core Database. Since 2001, Livestock Improvement Corporation has added new records and widened this data set, having collected these records from farmers. These extensive data resources could be used to develop new information that is of considerable industry value. In that case, Livestock Improvement Corporation would have a very strong position in the market in respect of that new information.

35. It is understood that Livestock Improvement Corporation claims intellectual property rights in respect of animal evaluation indices, including the Cow Breeding Worth index, which is widely used by the industry. It is envisaged that Livestock Improvement Corporation's commercial competitors in the herd testing and artificial breeding markets will need to make a commercial agreement with Livestock Improvement Corporation in order to receive Cow Breeding Worth index information for their own enrolled cows. This control over access to what seems to be essential information may result in Livestock Improvement Corporation obtaining substantial market power over its rivals in the herd testing and artificial breeding markets. There have been recent moves by Livestock Improvement Corporation to work with their competitors to address this issue.

Questions

3. Do you consider that there are barriers to entry or expansion in the herd testing and/or artificial breeding market? Please provide reasons.
4. In your view, does Livestock Improvement Corporation currently have market power in any of these markets? Please explain.
5. If you think that they do, then do you consider that transferring a copy of the core database to DairyNZ eliminates any or all of Livestock Improvement Corporation's market power? Please explain.

5.2 POTENTIAL MEASURES TO ADDRESS MARKET POWER

36. If the herd testing and artificial breeding markets are competitive then it is expected that market forces would be capable of delivering good outcomes for the industry over time. In particular, Livestock Improvement Corporation's large share of the herd testing and artificial breeding markets would either erode or be maintained depending on the skills and/or effort of Livestock Improvement Corporation and its competitors.
37. It follows that any policy measures to ensure a competitive market could usefully be focussed on ensuring that control over animal evaluation data resources does not become a barrier to entry or expansion in any of the related markets (herd testing, artificial breeding services, ancillary markets). At the same time it is important the market has significant incentives to collect data (via herd testing and monitoring) and to innovate in supplying services.
38. Should there be a need to incentivise more competitive and efficient markets, the options could include:
- a. industry agreements (self-regulation) such as the development of codes of conduct and/or undertakings regarding access to and pricing of information and/or independent review; or
 - b. industry specific regulatory requirements, covering, for example, information disclosure and/or obligations to supply (e.g., herd testing services to farmers and/or essential information to rivals) and/or pricing principles in respect of certain information.

Question

6. If you believe that Livestock Improvement Corporation has market power, do you consider there any particular measures could be used as potential ways of constraining this market power? Please explain, or provide examples.
7. Do you have any other views about how competition, efficiency and innovation in the dairy herd improvement industry could be promoted?

5.3 CONSIDERATION OF REGULATION OF LIVESTOCK IMPROVEMENT CORPORATION

39. As noted above, Livestock Improvement Corporation has requested the removal of two sets of constraints, one on its service offering and pricing in the herd testing market, and the other on its corporate form. We discuss these separately.

5.3.1 Herd testing service and pricing

40. Clause 9 of the Regulations obliges Livestock Improvement Corporation to provide herd testing service to any farmer that requests it, and requires that Livestock Improvement Corporation's prices be uniform within regions, though they can differ between regions.
41. The costs and benefits of these two requirements are a matter on which we would like respondents' views. It is recognised that herd testing (and recording) provides valuable information and that there is an industry good rationale for ensuring widespread data gathering continues to occur. However, it is also desirable that herd testing is undertaken on reasonable commercial terms.
42. If Livestock Improvement Corporation did materially reduce its herd testing operations, it might create opportunities for other firms to enter or expand, and could also be a signal that market prices need to adjust to more efficient levels. On the other hand, it might result in some farmers not having access to herd testing services as the cost of providing services could be too high.
43. The requirement that Livestock Improvement Corporation supply herd testing to all farmers could be viewed as being similar in concept to the "universal service obligations", which are sometimes used in telecommunications and electricity sectors. In those settings the net cost of the obligation is of interest. Sometimes, if there is a large net cost it is shared out across the industry in some way. Such arrangements are often very difficult, contentious and costly to design and administer.
44. The (within region) uniform pricing restraint prevents Livestock Improvement Corporation from making targeted offers of price discounts to farmers being served by CRV Ambreed or any other herd tester that may enter the market. Instead, the benefits of any lower prices Livestock Improvement Corporation offers to CRV Ambreed's customers must be extended to all farmers in the same region. This has two impacts.
 - a. First, it means that all farmers benefit from whatever price competition occurs as a result of CRV Ambreed's presence, even though only a minority of farmers use the competing service.

- b. Second, it increases the cost to Livestock Improvement Corporation of attempting to drive CRV Ambreed from a region by using temporarily lower prices.
45. These two impacts are likely to work together for the benefit of farmers, who are the customers in the herd testing market. In theory, CRV Ambreed is encouraged to some degree to undercut Livestock Improvement Corporation's herd testing service prices. To the extent that the larger firm responds all farmers benefit, and the larger firm would find it very costly to exclude the smaller firm from the market.
46. If Livestock Improvement Corporation did not have a much larger market share than CRV Ambreed, these arguments would be considerably weaker.
47. We are unsure how Livestock Improvement Corporation would behave in the absence of the uniform pricing rule. In many nationwide service industries firms offer the same terms to all customers because it is costly to differentiate. If Livestock Improvement Corporation currently has constant prices across regions it might indicate that a uniform pricing rule is not an onerous (costly) obligation.
48. The potential impact of new herd testing technology should be factored into analysis of these issues. As on-farm automation develops, more automated milking systems are being installed.³ These are capable of eliminating the human element in herd testing, and also allowing greater frequency of testing. If this kind of technology was rapidly adopted it could significantly disrupt the herd testing markets.

Questions

8. In your view, how would Livestock Improvement Corporation change its conduct if these herd testing obligations (including uniform regional prices) were removed?
9. How would the changes you identified above affect farmers, Livestock Improvement Corporation and the industry as a whole?

5.3.2 Corporate form

49. It is generally considered that co-operative ownership mitigates the risk that a firm with market power will use it to the detriment of its owners. On the other hand, one of the risks of a purely co-operative ownership structure is that of instability. If competitors attract enough of the owner/customers from the co-operative, there is a risk of collapse, particularly if the remaining shareholders are obliged to buy out those leaving the co-op. As co-operatives admit investor capital, both of these effects weaken: the co-operative is more inclined to act in a purely commercial way, for example by increasing its prices, but it might also become a more stable organisational form.
50. The specific constraint on Livestock Improvement Corporation's co-operative status requires Ministerial approval before Livestock Improvement Corporation could apply for cancellation of its registration under the Co-operative Companies Act 1996. That Act (in section 2(1)(a)) defines a cooperative as a firm in which at least 60 percent of the voting rights are held by transacting shareholders (farmers in this case).

³ http://www.dairynz.co.nz/page/pageid/2145869624/Automated_Milking_Systems_AMS_

51. Removing the obligation for Ministerial consent would permit Livestock Improvement Corporation to proceed further (and indeed fully) towards demutualisation with the consent of its shareholders, which would lessen or remove the risk mitigation afforded by the co-operative structure.
52. Whether this is acceptable depends on how effectively the other parts of the regulatory and incentive structures acting on Livestock Improvement Corporation mitigate these market power risks.

Questions

10. If Livestock Improvement Corporation was not a co-operative, and if there was no obligation on Livestock Improvement Corporation to provide uniform regional pricing, do you think Livestock Improvement Corporation would set different prices? Please supply reasons.
11. If Livestock Improvement Corporation was not a co-operative do you think it would make any other significant changes to its operations? Please supply reasons.
12. Are you in favour of giving Livestock Improvement Corporation the right to demutualise (i.e. to stop being a co-operative) without Ministerial consent? Why or why not?

5.4 OVERSIGHT OF ACCESS TO DAIRY INDUSTRY CORE DATA

53. The Dairy Core Database is overseen by an Access Panel. The Access Panel is a three member panel, whose functions are to determine applications for access to data in the Dairy Core Database, determine other circumstances in which data in the Dairy Core Database must be made available and appoint an auditor to ensure that access to the Dairy Core Database has been carried out in line with the requirements of the regulations.
54. It has been suggested that the jurisdiction of the Access Panel extend to include access to Livestock Improvement Corporation's historic copy of the core database, and its future set of core data. In considering this request we need to recognise the potential for Livestock Improvement Corporation to demutualise. That would raise two potential risks.
55. One concerns the efficient operation of markets in New Zealand. For example, changes to the National Breeding Objective could result in the DairyNZ database becoming partially obsolete. In this scenario, Livestock Improvement Corporation would likely be the majority holder of the data required to support the National Breeding Objective. Risks of this type may be manageable without the section 51 and 52 of DIRA restrictions (relating to Ministerial approval for material changes to Livestock Improvement Corporation's co-operative structure), provided there are structures in place that ensure that the scope of the DairyNZ database expands efficiently in line with developments in animal evaluation research.
56. The second type of risk is to the competitive position of the New Zealand dairy industry as a whole. For example, relaxing the section 51 or 52 restrictions could, with shareholder consent, lead to the Livestock Improvement Corporation becoming (either partially or wholly) controlled by foreign interests. This could mean there is a possibility that those

interests would have the ability and incentive to use Livestock Improvement Corporation's data and animal resources to adversely impact the New Zealand dairy industry as a whole.

57. The second type of risk is to the competitive position of the New Zealand dairy industry as a whole. For example, if, as a result of relaxing the section 51 or 52 restrictions, Livestock Improvement Corporation shareholders were to consent to Livestock Improvement Corporation becoming (either partially or wholly) controlled by foreign interests, those interests may have the ability and incentive to use Livestock Improvement Corporation's data and animal resources to adversely impact the New Zealand dairy industry as a whole.

Questions

13. Do you consider that the Access Panel should have jurisdiction over access to Livestock Improvement Corporation's historic copy of the core database, and its future set of core data? Why or why not?
14. If Livestock Improvement Corporation were to become controlled by foreign interests, do you consider that there would be a risk to industry information held by Livestock Improvement Corporation? Why or why not?
15. If your answer to 14 is "yes", what measures should be considered to mitigate this risk? Please explain.