

BRIEFING ON MEETING WITH JOINT MINISTERS ON INCREASING PASTORAL AND FOOD SECTOR INNOVATION

Purpose

1. *This brief updates you on issues for discussion with Hons English, Brownlee and Dr Mapp regarding increasing innovation in the pastoral and food sector, further to your discussion with Cornerstone Investors regarding the New Zealand Fast Forward principles.*

Key Points

2. You have met with three members of the New Zealand Fast Forward Board on 27 November 2008 and with Cornerstone Investors on 2 December 2008. You stated the Government's commitment to increased investment in pastoral and food sector innovation across the whole of the value chain (education and training; research and development; product development and commercialisation). You made it clear that the Fast Forward Fund will not continue and that Fast Forward Limited, as currently structured, will be disestablished. You are looking to work with Cornerstone Investors on options going forward.
3. At that meeting, there was agreement that the underlying principles of New Zealand Fast Forward were sound.
4. On 5 December, MAF provided you with some initial analysis on three broad options for giving effect to these principles: a company and board; a governance council advising you; or a new consortium model. You advised that you would like to keep all these options on the table at this time. There is also the option of using existing mechanisms.
5. Subsequent to these meetings, we understand you would like to meet with other Ministers with an interest in New Zealand Fast Forward (the Minister of Finance, Minister for Economic Development and the Minister of Research Science and Technology) to discuss options for boosting pastoral and food sector innovation based on the principles discussed with Cornerstone Investors.

Recommendations

6. We recommend that you:
 - a) **Note** that there are four possible alternatives for increasing innovation investment in the pastoral and food sector:
 - **a legal entity**, such as a company with a representative board, under which the Government and industry would agree a package of co-ordinated and

aligned investments designed to address shared strategic goals across the value chain. As a separate legal entity it could enter into contracts with the government and industry partners that specify the actions each party will undertake; or

- **a government-industry governance council**, to recommend appropriate investments for you and/or other responsible Ministers to approve government investment in. The contracting of the activities could be undertaken by MAF on your behalf; or
- **a new type of consortium**, including educational/training institutions, research, development and commercialisation and leading to profitable products and services. This would differ from the current research consortium model in that it would have a much broader mandate and scale of investment; or
- **use of existing mechanisms**, though improving co-ordination across and between the policy agencies (MAF, MED, MoRST) and operational agencies (FRST, MAF, TEC and NZTE) and collaboration with industry.

Noted

- b) **Note** that departments hold differing views on the ability of existing mechanisms to deliver the requisite level of growth in the pastoral and food sector necessary for the sector to have a significant impact on economic growth.

Noted

- c) **Agree** with your colleagues that your preferred:

- a) *Funding mechanism* for pastoral and food innovation funding is:

Either

An annual appropriation

Agreed/ Disagreed

Or

A multi-year appropriation

Agreed/ Disagreed

- b) *Structural mechanism* for delivering on the core principles agreed with New Zealand Fast Forward Cornerstone Investors is:

Either

A legal entity, for example a company and board

Agreed/ Disagreed

Or

A government-industry governance council

Agreed/ Disagreed

Or

A new type of consortium

Agreed/ Disagreed

Or

Use of existing mechanisms

Agreed / Disagreed

d) **Instruct** officials to prepare a Cabinet paper on this basis for early 2009.

Agreed / Disagreed

Richard Lynch
Director
Innovation & Research

Hon David Carter
Minister of Agriculture

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BACKGROUND AND ANALYSIS

Background

7. This note provides information for you to discuss with the Minister of Finance; Minister for Economic Development and Minister of Research, Science and Technology around options for boosting pastoral and food sector innovation based on principles discussed with Cornerstone Investors in Fast Forward. A separate report provided you with information on how the two Fast Forward companies could be wound up (B08-311 refers).
8. The Fast Forward initiative comprises two companies:
 - **New Zealand Fast Forward Fund Ltd (NZFF Fund)** manages the \$700 million fund; and
 - **New Zealand Fast Forward Ltd (NZFF Ltd)** works with industry to develop the pastoral and food sectors. This is underpinned by a Heads of Agreement (HoA) between the Cornerstone Investors¹ and the Crown. It determines the Fast Forward strategy for development of the pastoral and food sector and approves investment of the Crown's contribution (provided by the NZFF Fund) and overall matching industry investment to achieve its strategy.

Meeting with Cornerstone Investors

9. On 2 December 2008, you met with Cornerstone Investors to discuss the future of New Zealand Fast Forward. You stated the Government's commitment to increased investment in pastoral and food sector innovation but made it clear that the NZFF *Fund* will not continue.
10. There was agreement with Cornerstone Investors that the underlying principles of New Zealand Fast Forward were sound. These principles are:
 - partnership: a long term commitment by all parties to achieve an agreed collective benefit, including building capability;
 - transformation: increasing New Zealand's long term productivity and economic growth, sustainability, product innovation and market development;
 - sustainability: environmental, economic, social and cultural;
 - additionality: investments resulting in new activities in addition to those that would otherwise have occurred;
 - benefit to New Zealand: across industries and along the whole value chain; and
 - best practice: including minimising transaction costs and maximising the ease of partners entering into contracts together.

¹ The six Cornerstone Investors are DairyNZ Incorporated, Fonterra Co-operative Group Limited, Meat and Wool New Zealand Limited, Meat Industry Association of New Zealand (Incorporated), PGG Wrightson Limited and Zespri Group Limited.

11. Cornerstone Investors indicated their willingness to keep their additional investments 'on the table' if there is a continued, shared commitment to these principles. They stressed the need for a long-term commitment and noted particularly that there has been a significant culture change within industries, prompted by the principles, so that they now think more strategically and consider longer-term capability issues.

Analysis

12. The key questions for Ministers are:
 - a) Whether to keep or wind up NZFF Fund;
 - b) Whether to keep or wind up NZFF Ltd;
 - c) If NZFF Ltd is wound up, whether it should be replaced with an alternative structure such as a company, a governance council, a new consortium, or use existing mechanisms; and
 - d) How much funding to commit to pastoral and food sector innovation, including whether to use other funding commitments in research, science and technology.

Decisions on NZFF Fund – whether to keep or wind up

13. NZFF Fund manages the Crown's \$700 million investment in Fast Forward. The Fund demonstrated a significant upfront commitment by the Crown to invest alongside the primary sector in its future. In officials' view, a clear long-term commitment is a vital part of the initiative. However, there is flexibility in how this is achieved.
14. If NZFF Fund is wound up, but Ministers wish to keep supporting pastoral and food sector innovation, decisions on another funding mechanism will be needed. The alternatives to a fund are:
 - an annual operating appropriation, although it would provide less certainty for industry about the Government's ongoing commitment as it would be subject to the demands of the annual budget cycle; or
 - a multi-year appropriation of up to five years, which would provide more certainty for industry, although these are usually only used for one-off activities where there is real uncertainty about the timing of expenses between fiscal years.

Alternative structures if Fast Forward Ltd is wound up

15. An alternative structure would aim to preserve the desirable features of Fast Forward. The options for this include:
 - **a legal entity, such as a company with a representative board**, under which the Government and industry would agree a package of co-

ordinated and aligned (including, but not limited to, co-funding) investments designed to address shared strategic goals. As a separate legal entity it could enter into contracts with Government agencies and industry partners that specify the actions each party will undertake;

- **a Government-industry governance council**, to recommend appropriate investments for you and/or other responsible ministers to approve. The contracting of the activities could be undertaken by MAF on your behalf; or
 - **a new type of consortium** including educational/training institutions, research, development and commercialisation and leading to profitable products and services. This would differ from the current research consortium model in that it would have a much broader mandate and scale of investment.
16. Appendix 1 provides an initial assessment of each of these alternative structure options against the principles outlined above.
17. Alternatively, funds could be invested through **existing mechanisms**, although changes to these mechanisms would be necessary to achieve the same market-driven, whole of value chain approach as embodied in the principles. While this may allow some programmes to start sooner, the use of existing mechanisms carries risks of fragmentation and so improving co-ordination across and between the policy agencies (MAF, MED, MoRST) and operational agencies (FRST, MAF, TEC and NZTE) would be necessary. Also, given the importance of maintaining genuine partnership with industry, consideration would need to be given to how industry views and priorities would be reflected and improve both cross-sector and individual industry value chain priorities at a multiple agency level. For example, a sector-led oversight body involving the Cornerstone Investors could be introduced.

How much funding to commit to Fast Forward (or its successor)

18. Decisions on investment in innovation in the pastoral and food sector need to be made in context of the Government's policy commitments as part of its RS&T and agricultural policies including:
- Establishing an international centre for research into greenhouse gas emissions from livestock at the cost of \$20 million a year;
 - Increasing funding within for the primary sector and food research of \$25 million a year; and
 - Increasing funding for research consortia in the primary and food sectors of \$25 million a year.

Comments by Departments

Ministry of Research Science and Technology

19. MoRST believes that using existing schemes provides a credible option to increase innovation in the primary sector. Existing public-private partnership schemes such as research consortia and Pastoral 21 can be relatively easily expanded to achieve the scale sought and be delivered in a timely, efficient and effective fashion.
20. Many of the existing Research Consortia are primary industry based (pipfruit, seafood, dairy, meat and sheep sectors) and have been shown to be successful public-private R&D partnerships, leading to a number of commercial success stories, with products on the market. Consortia are legal entities designed to achieve commercial and other benefits for industry. They tend to be in the \$2-5 million range with government and industry co-funding the R&D and industry funding the commercialisation post prototype stage. Each consortium has at least two industry partners; the consortia determine the R&D priorities to ensure that the R&D is highly relevant to their needs.
21. Using existing mechanisms would require improving co-ordination at both the strategic and operational levels between FRST, MAF, TEC and NZTE funded schemes in the agricultural sector, and introducing a sector-led oversight body involving the Cornerstone Investors. The core underlying principles of Fast Forward can be advanced using the above commitments without introducing significant further complexity or cost into the system. The utilisation of existing mechanisms would also mitigate the risk of duplication with existing efforts and ensure that new investments result in the additionality required to drive sector growth.

Ministry of Economic Development

22. MED considers that to achieve substantial gains in the competitiveness of the pastoral and food sector, and therefore for the whole economy, it will be necessary to take bold and ambitious action, such as that envisaged for broadband. Maintaining and building the quality and focus of our research capability in the pastoral and food industries remains important, but the most difficult and costly part of the innovation process is commercialisation. It would be insufficient, in MED's view, to apply funds through existing mechanisms (e.g. research consortia or Centres of Research Excellence) because:
 - a Innovation requires a focus on commercialisation as well as research, whereas existing funding structures do not span the full value chain from basic research to commercialisation in global markets (see Appendix 2 on innovation systems issues);
 - b More innovative approaches are needed to boost the sector's performance, and existing structures for both decision-making and delivery outcomes have significant risk aversion built into them, compared with the commercial sector, given that they are responsible for public funds;
 - c Commitment and involvement from industry is necessary in priority setting;

- d Spreading responsibility across multiple agencies increases fragmentation; and
 - e If the Government is to engage with industry, industry needs a coherent single point of contact in the Government with which to engage.
23. It is partly for these reasons that, in MED's view, existing mechanisms, operating separately and driven by the Government and science rather than industry goals, have not delivered productivity gains on the scale necessary. Further investment in the same mechanisms is only likely to produce more of the same results.
24. MED expects more industry commitment (including over funding) if there is more scope for industry and the Government to work together to decide on funding priorities, rather than those priorities being prescribed solely or primarily by the Government as under existing mechanisms. The risk of being prescriptive about where funding needs to be spent is that industry walks away or is less committed.

Treasury

25. Treasury considers that the best option involves balancing objectives that include lowering administrative costs, getting the private sector to invest more in innovation, and getting more private-sector say into priorities for public funding. Treasury considers that the best way to advance the principles of Fast Forward is through an entity at arm's length from the Crown representing both government and industry. This would allow all parties the ability and confidence to fully participate at both the operational and governance levels. Treasury thinks this is worth the higher administration costs—using existing mechanisms is not as likely to get full private sector participation. However, it will be important to ensure good coordination between the arms-length entity and existing funding mechanisms to get maximum benefits.

Ministry of Agriculture and Forestry

26. MAF considers that either a company structure or a governance council (with a separate contracting entity) would effectively enable the outcomes to be achieved. The company structure has the advantage that the accountabilities are clearly understood.

Comments from Chair of New Zealand Fast Forward Limited

27. On 27 November 2008, you met with Bill Falconer, Chair of New Zealand Fast Forward Limited, and two other board members, Mike Matthews and Kevin Marshall. At this meeting, you invited Mr Falconer to set out options for the implementation of the valuable aspects of New Zealand Fast Forward. Mr Falconer's reply is attached as Appendix 3.

Comments from Cornerstone Investors

28. Subsequent to your meeting on 2 December, MAF officials had a productive discussion with Cornerstone Investors around options for putting the principles that you discussed with them into practice. The Cornerstone Investors continue to support these six principles and believe that these should be strengthened by the addition of two more: being industry-led and having a long-term commitment. In addition, they suggest that the principle of “sustainability” needs to be clear about covering a wide scope including people and capability and that this initiative is broader than just science.
29. Overall, the Cornerstone Investors expressed a desire to work with whichever vehicle Ministers prefer, as long as that vehicle is well-designed to give effect to the principles. The Cornerstone Investors felt that any of the three options MAF officials raised with you could be made to work, with good design. Potential features and benefits of all three options were discussed. Cornerstone Investors raised some issues with each option that would particularly need to be addressed in order for that vehicle to succeed. These are:
- *Company and board* - this mechanism is very similar to the existing New Zealand Fast Forward Ltd company, where accountabilities are clearly understood.
 - *Governance council* - needs to focus on outcomes and have a simple way to enter into contracts. Responsibilities and accountability for prioritisation and decision-making must be clear. The council needs to do, not just talk.
 - *New consortium* - an industry-led and long-term focus will be important, and the current research consortium model is limited in its ability to deliver these two things.
 - *All options* - while providers need to be involved in developing investment programmes, Cornerstone Investors would not like to see providers participating in making investment decisions. Providers are potential beneficiaries of investments, so participating in decision-making could lead to conflicts of interest.
30. Cornerstone Investors are comfortable with the idea of multi-year appropriations and would prefer these to come through Vote: Agriculture, given the wide scope of what the principles are aimed at achieving (including education, training and capability; research and development; and commercialisation and market development).
31. Cornerstone Investors indicated that their industries are engaged and ready to start programme-level planning for investment.

APPENDIX 1

	Company and Board	Governance Council	New consortia (adapted from from current research model)
Partnership	<p><u>Excellent</u></p> <p>Well understood and familiar to Cornerstone Investors. Ability to agree strategic priorities and enter into contracts is likely to resonate well with the private sector.</p> <p>With effective, representative composition, is likely to enable a whole of value chain approach.</p> <p>Long term commitment could be achieved by a multi-year appropriation.</p>	<p><u>Very Good</u></p> <p>Less independence than a company, and would require an agency such as MAF to undertake the contracting based on the recommendations agreed with Ministers.</p> <p>With effective, representative composition, is likely to enable a whole of value chain approach.</p> <p>Long term commitment could be achieved by a multi-year appropriation.</p> <p>Good communication required to avoid implying lack of equal footing between industry and government.</p>	<p><u>Medium to Good</u>, if the rules specify the composition of partners and the governance arrangements are more flexible than the current research consortium model.</p> <p>Current research consortia boards have a mix of research providers and industry representatives.</p> <p>Most consortia require money to be placed into a common pool and the consortia determine how the money is invested. This could take a whole of value chain approach but is likely to favour project-by-project co-funding and may limit the ability to align and coordinate investment in other ways.</p> <p>The challenge with a mega consortium would be prioritisation across a range of activities such as research, education and capability building, and commercialisation.</p> <p>Consortia with defined functions to deliver on components of the over arching strategy could sit under one of the other mechanisms (Company/Board or Governance Council).</p>
Economic Growth and	<u>Very good</u> , especially if all parties	<u>Good/very good</u> if industry believes	<u>Medium</u> , with good governance

Transformation	are engaged in a whole of value chain approach and there is a long term commitment. This is evident in the changes Cornerstone Investors have already noticed in how their industries are planning for their own futures.	their priorities are being taken into account.	arrangements. Inclusion of education/training through the value chain to commercialisation brings more perspectives. May be less flexible in its ability to try novel ways of achieving outcomes such as aligned activity and using other entities (for example, DairyNZ) as a lead provider.
Sustainability	<u>Good</u>	<u>Good.</u>	<u>Good</u>
Additionality	<u>Good.</u> Open dialogue and partnership mechanism can lead to cross-fertilisation of ideas and synergies.	<u>Good.</u> Open dialogue and partnership mechanism can lead to cross-fertilisation of ideas and synergies.	<u>Medium.</u> Part of additionality is about effective new ways of working together. A potentially unwieldy consortium mechanism may not lead to significantly new outcomes.
Benefit to NZ	<u>Very good</u> if education/training and/or research and scientific perspectives are included. This mechanism particularly encourages industry to consider interests wider than their immediate future and whole of value chain viewpoint.	<u>Very good</u> , particularly with a specific dialogue mechanism enabling government to reflect back to industry.	<u>Good</u> , given the range of interests involved along the value chain. The challenge will be to ensure that with multiple providers and multiple investors, clear priorities can be agreed.
Best practice	<u>Good.</u> A company structure is well understood with clear accountabilities.	<u>Medium to Good.</u> The coordination between the Governance council, the implementing agency and other investors will be critical for the success of such an approach.	<u>Medium.</u> New Zealand already has a research consortium model that would need to be significantly adapted for this purpose. Current rules for consortia are that funding can be used for R&D and prototype development, but commercialisation must be a minor proportion of the overall investment.

APPENDIX 2

Innovation in the Pastoral and Food Sector

1. The future prosperity of New Zealand depends on its ability to grow its economic base in an environmentally sustainable way. Sustainable growth largely depends on technological change, which in turn rests on innovation.
2. As a small economy based primarily on natural resource endowments, New Zealand's growth will rely on its ability to adapt and apply technologies – often developed elsewhere – to its own areas of specialisation, notably the pastoral and food sector. Critical to growth will be New Zealand's ability to increase scale in global markets to overcome the constraints of a small domestic market and distant international markets.
3. These characteristics, common to many small economies, mean the government needs to make strategic and targeted choices on where New Zealand can secure competitive advantage and what is needed to support it. New Zealand needs to aim for leadership in a small number of priority areas.
4. The OECD and others have noted that government support for innovation in New Zealand is too fragmented, which has resulted in duplication, clutter and sub-optimal scale. This has made it difficult to allocate public resources in a strategic manner. To achieve the growth, government efforts need to be more deliberate and concentrated. This requires judgements about which areas of the economy offer the greatest potential for innovation.
5. New Zealand is not alone in concluding that an innovative and productive economy must concentrate its efforts in areas of competitive strength. For example, as part of the recent Australian Review of the National Innovation System, a number of “national innovation priorities” were identified. These areas included: agricultural and food security, climate change mitigation and adaptation, population health, tropical solutions, broadband applications, resource industries, space and astronomy, finance and risk management, and marine industries.
6. Research suggests that small open economies such as New Zealand mainly innovate and grow on the basis of long-standing and mature industries. Much of New Zealand's economic growth has been, and will continue to be, driven by the primary sector and its associated industries.
7. New Zealand's long history of leveraging off its natural resources has led to the pastoral and food industries being situated at the core of the New Zealand economy. In 2006, these sectors generated 57 percent of our export earnings from merchandise trade and, directly or indirectly, employed one in five members of the working population.
8. Maintaining growth will require unrelenting investment in innovation to achieve productivity improvement, without compromising environmental sustainability.

Current production increases are not consistent with this goal, placing our long-term economic sustainability at risk. The biggest challenge is therefore lifting productivity with reduced inputs and lower environmental impacts.