Final Report

Producer Innovation Fast Track Impact Assessment

For

Meat & Livestock Australia

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Executive Summary

The Producer Innovation Fast Track (PIFT) Impact Assessment project was undertaken to assess the impact of producer participation in the PIFT program on innovation capability, the extent of actual and intended innovation adoption and the economic impact of the program via a benefit cost analysis.

This report presents the results of the impact assessment based on information collected from 96 service providers and producers involved across 76 projects in the PIFT program (73 current projects and 3 withdrawn projects). Information was collected from project leaders via a phone interview and from producers involved in group projects via a combination of phone interviews and an online survey. Detailed case study analyses were completed for seven of the projects across all three project streams (Entrepreneur – 2 case studies, Diversify – 1 case study, Trailblazer – 4 case studies).

Program Impact on Innovation Development and Adoption

Results from the impact assessment revealed the following key findings regarding program impact:

- The PIFT program was perceived by 93% of program participants to have ***FAST-TRACKED*** the ***development*** of their innovation by an average of 115%.
- Participation in the PIFT program enabled producers to FAST-TRACK their innovation by providing funding for ***access to technology and expertise***, assisting to ***de-risk innovation development***, and by providing resources and support to assist with ***focus, motivation, rigour, direction and clarity*** during the development phase. The program also enabled producers to ***more effectively test and trial*** innovation ideas and for some, to ***implement on a larger scale*** than might otherwise have occurred.
- Even though over half of participants had not yet commenced adopted/implemented of their innovations, there was a ***HIGH degree of CERTAINTY*** that adoption/implementation would occur in the future.
- Without participation in the PIFT program, 26% of participants believe that they ***would not otherwise have adopted/implemented their innovation at all***, and only 6% thought they would have still achieved adoption/implementation in the same timeframe and on the same scale. All other participants felt that without participation in the PIFT program, adoption/implementation of their innovation would still have occurred but ***on a SMALLER SCALE*** and/or ***taken up to 5 years LONGER*** to achieve.
- It was ***TOO EARLY*** for the majority of participants (65%) to have received any benefits from their innovation yet.
- ***UNEXPECTED POSITIVE IMPACTS*** were experienced by 45% of participants, while 24% of participants experienced ***UNEXPECTED NEGATIVE IMPACTS***.
- Other non-dollar expected project benefits included ***ANIMAL WELFARE***, ***ENVIRONMENTAL*** (improved ground cover/reduced erosion, improved soil health) and ***HUMAN RESOURCE benefits*** (increased confidence, connections, planning, inspiration/motivation, satisfaction, risk taking, changing goals and attendance at skills/knowledge workshops).
- The participants also anticipated ***BENEFITS to PRODUCERS not directly involved*** in the PIFT program and to ***other stakeholders along the VALUE CHAIN***, however these were typically unable to be quantified by participants.

Benefit Cost and Sensitivity Analysis

The results from the benefit cost analysis (BCA) represent only a partial analysis of the PIFT program as not all project leaders who were interviewed were able to provide an estimate of expected additional annual profits due to innovation adoption, either because it was too early in project development to make an estimate or they were uncertain as to how to calculate expected economic benefits (31% did not provide an estimate of expected additional annual profits). In addition, the project leaders for two of the current projects were unable to be contacted for interview. Only the costs associated with the individual projects where a value for expected additional annual profit was provided have been included in the BCA analysis, and MLA overhead and administrative costs have been allocated on the basis of the same average cost per project involved in the program.

The benefit cost analysis revealed that using a 7% discount rate, over a 25 year time horizon a B:C ratio of **45.4** and an NPV of **$213.24 million** was generated as a result of MDC investment in the PIFT program. Over a 20 year time horizon the B:C ratio and NPV for MDC investment were **39.5** and **$184.92 million** respectively and over a 15 year time horizon, B:C ratio and NPV were **30.7** and **$142.58 million** respectively.

These values are ***clearly very high*** and are ***strongly influenced by a relatively small number of very high value projects***. The four projects with the highest reported expected additional annual profits, ranging from $4 million to $77.5 million, ***accounted for 91% of total NPV***. When these four projects and their associated investment costs are excluded from the analysis, the B:C ratio and NPV for MDC investment over a 25 year timeframe fall to **5.3** and **$19.01 million** respectively. Over a 20 year time horizon, the B:C ratio and NPV for MDC investment fall to **4.9** and **$17.32 million** respectively and over a 15 year time horizon, B:C ratio and NPV fall to **4.3** and **$14.76 million** respectively.

Projects in the Diversify stream accounted for the majority of total program NPV benefits (50%), compared to 39% from the Trailblazer stream and 11% from the Entrepreneur stream. This was primarily due to the Diversify stream containing the largest proportion of projects (30%) where multi-million dollar additional annual profits were expected. This stream also had the largest proportion of projects where the project leader reported that they would not otherwise have adopted/implemented the innovation at all if they had not participated in the PIFT program.

This means that a greater proportion of the expected multi-million dollar benefits were attributed to the PIFT program than was the case with the other two streams. Of particular note is that all of the projects in the Entrepreneur stream reported that they would still have adopted/implemented the innovation, albeit perhaps later and/or on a smaller scale, if they had not participated in the PIFT program.

It should also be noted that there is a large degree of uncertainty around the actual degree of profitability due to the early stages of development of many of the projects involved and the subsequent lack of rigour around many of the profit estimates provided. While the best data available was utilised for conducting the BCA, with the exception of the case study projects, the accuracy of the estimates provided by producers and project leaders was unable to be validated.

Comments provided by project leaders during the interview process and comparison of case study project calculated profits with estimates provided by case study project leaders during the interviews, suggests that in general, estimates of additional annual profits provided during the interview process tend to be more optimistic than realistic.

However, a sensitivity analysis of BCA results to expected additional annual project profits revealed that even in the 'worst case' scenario, MDC investment in the PIFT program still generated a B:C ratio of 3.7 and an NPV of $11.89 million using a 7% discount rate over a 25 year time horizon (excluding the four most profitable projects).

The big unknown is how many of the innovations planned to be adopted will eventuate and how many of them will still be operating in 5 or 10 years' time. Research suggests that anywhere between 50 and 90 percent of start-up businesses fail within the first five years of operation. For this analysis it has been assumed that 80% of Entrepreneur and Diversify stream projects will fail in the first 5 years 'with PIFT' investment, and 90% will fail 'without PIFT' investment. An assessment of the sensitivity of investment criteria results to variation in this failure rate has been provided in the BCA section of the report.

Innovation Capability

Results from the impact assessment revealed the following key findings regarding program impact on producer innovation capability:

- Participation in the PIFT program caused **CHANGES IN THINKING** about innovation among participants in addition to improvements in innovation capability via ***improved skills and knowledge*** for 94% of participants.
- Seventy-two percent of PIFT program participants identified areas where there was an ON-GOING NEED for ***further skill development and learning***.
- ***PERSONAL BENEFITS*** were experienced by 79% of participants.
- Eighty percent of participants reported either a large or moderate improvement in their ***ability to appropriately test/trial and validate ideas (processes/technology/products)***, and 78% reported either a large or moderate improvement in their ***ability to critically evaluate the overall potential value of an innovation***.
- Sixty-five percent of participants reported either a large or moderate improvement in their ***level of preparedness for future business growth or innovation adoption***. Similarly, 66% reported either a large or moderate improvement in their ***capability to generate and implement innovative business ideas/practices in the future***, although a lower proportion reported a large improvement relative to a moderate improvement.
- Seventy-two percent of participants reported either a large or moderate improvement in their ***willingness to generate and implement innovative business ideas/practices in the future***, with the proportion reporting a large improvement in willingness (40%) being much higher than the proportion reporting a large improvement in capability (23%).
- It seems that involvement in the PIFT program has had more impact on increasing producer ***willingness*** to be innovative in the future than it has on increasing producer ***capability*** to implement innovations.
- Being involved in the PIFT program has provided 60% of participants with strong ***MOTIVATION*** to be involved in other collaborative innovation projects in the future.
- Thirty-eight percent of participants perceived an increase in the ***QUALITY*** of innovation project outcomes due to involvement in the program.
- Two-thirds of project leaders/proxies interviewed reported an increase in the ***CERTAINTY*** around decisions to adopt/implement project innovations. Certainty around innovation adoption was on average increased by 30 percentage points due to participation in the PIFT program.

- There were more service providers acting as project managers/coordinators than expected (26% of participants interviewed). The value of service providers in this role and the degree to which they enabled producers to develop innovation capability was beyond the scope of this evaluation and needs to be explored further.
- PIFT has undoubtedly built innovation capability in participants in the short term. The degree to which this capability persists long term will be determined by the participants own confidence and willingness to apply this capability in future, external market and climatic conditions and opportunities for support. Of these three factors, MLA has direct influence over support structures and can do this by either directly funding more PIFT style projects or indirectly by leveraging networks and other resources to participants. This would ensure the legacy of PIFT innovation capability is maintained beyond the life of the individual projects involved.

Program Administration and Support

Results from the impact assessment revealed the following key findings regarding program administration and support provided to participants:

- Most participants (91%) considered the MDC co-investment amount to be adequate to meet the needs of their project.
- Just under half of participants (44%) would still have participated in the program if the co-investment model was 50:50.
- The support from MLA met 53% of participants needs from the project. There were many suggestions for how the project could be administered better and provide better links/connections and communication to participants.
- Over half (53%) of the participants reported that the project took longer than expected. Most of this extra time was spent on project management (administration, budget, invoicing, planning and communicating with MLA). This suggests participants need more support with these aspects of project delivery.
- Most participants reported that they were motivated to participate in future collaborative projects and in hindsight they would still have participated in the PIFT program.
- Many program participants expressed appreciation to MLA for the opportunity to participate in the program and commented on the value of the program to both themselves and the broader industry, however comments provided by participants also suggest that there are opportunities to further improve the value of the program.
- There is strong support among current program participants for continued co-investment by MLA with producers in innovation development.

Key Recommendations

A summary of the recommendations provided during the impact assessment is provided below:

1. Measuring Impact of the PIFT Program

Recommendation 1: In order to conduct a full BCA of the PIFT Program, estimates for expected additional annual profits would need to be provided for all projects. This could be achieved either by providing funding for external expertise to assist project leaders to calculate expected profits, or by providing training to project leaders to ensure that they are able to calculate expected profits utilising the best information available at the time.

Recommendation 2: To increase the accuracy of data on expected additional annual profits for PIFT projects in the future it is suggested that a greater proportion of case studies are undertaken across a range of projects, and ideally all projects would have estimates of additional profits validated but the cost of this process may be prohibitive.

Recommendation 3: To enable more accurate calculation of both total investment and MDC investment returns, it is recommended that MLA collect information regarding any additional sources of funding outside of the MDC co-investment model which have been utilised during the PIFT program period.

Recommendation 4: In order to more accurately calculate future return on MDC investment in this project it is recommended that MLA collect information from producers prior to commencement of their project of how much time and dollars have already been invested in the project to date.

2. Capability Building

Recommendation 5: Continued assistance to producers is required to further build innovation capability to better support their willingness to be innovative.

Recommendation 6: That MLA further explore the role of service providers in the PIFT projects to define the parameters of their involvement in PIFT in the future.

Recommendation 7: That MLA build a 'post PIFT' support program or Alumni to enable participants to stay connected to MLA and receive/share information that may enable them to apply their innovation capability into the future. This Alumni could also be utilised to assist with program evaluation by determining the number of innovations which have been successful/failed over the next five years and to provide more accurate value for additional profits generated due to innovation adoption in the future.

3. Program Administration and Support

Recommendation 8: MLA look at streamlining PROJECT REQUIREMENTS including timelines, reporting, budgeting, invoicing etc. There is a need for a more detailed 'info pack' to step people through the process and more help in the set-up phase. Participants were also wanting LONGER PLANNING WINDOWS and LONGER-TERM PROJECTS. While it was felt that MLA took a long time to start, they didn't allow others enough time to put in their applications (application window too short) or gave projects enough time to achieve the results they were after.

Recommendation 9: MLA employ PROJECT SUPERVISORS to help oversee the administration and reporting requirements and check in with the project participants to see how things were tracking. There were many comments about MLA being difficult to contact or get help from because staff kept changing so didn't know who to talk to or how to get in contact with a real person at MLA (rather than the automated switch board) – a dedicated project supervisor for each project would solve this issue.

Recommendation 10: MLA use more MENTORS and COACHES to help participants with business and technical aspects of the project. MENTORS would need to be expert in their field to offer appropriate advice in the technical aspects of the project in addition to budgeting, analysing risk/reward and other aspects of management. COACHES would provide accountability and assistance with strategy and working through issues.

Recommendation 11: MLA invest in CONNECTING participants to more EXPERTS, such as experts in biodiversity, software development, Intellectual property rights, IT and other researchers/industry people in general. MLA could also introduce participants to others in the industry and other fields to create broader networks for each project to operate in.

Recommendation 12: MLA invest in additional training such as MARKETING and PROJECT MANAGEMENT (including budgeting, ROI and BCA), and provision of clearer guidelines for understanding INTELLECTUAL PROPERTY RIGHTS.

Recommendation 13: MLA review the IP clause 9A in the producer contracts, particularly in regards to projects in the Entrepreneur and Diversify streams where potentially millions of dollars of private revenue are involved. It is suggested that clause 9A may be suitable for the types of projects contained in the Trailblazer stream but are less appropriate for more commercially based projects.

Recommendation 14: MLA ensure that all contracted mentors, coaches and technical experts assisting project leaders and participants are required to sign an appropriate confidentiality or non-disclosure agreement and that this requirement is made clear to producers to allay any fears regarding potential use or sharing of their IP by these contractors.