


Cost Benefit Analysis
of
Dairy Industry
Farm Business Strategic Review

Executive Summary

A report to

Rural Business Support

Prepared by

 *econsearch*

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EXECUTIVE SUMMARY

Rural Business Support (RBS) engaged 30 dairy farming families to participate in a pilot Farm Business Strategic Review ('the Program') in South Australia in 2016. The Program included a review of each family farm's position, a comparison to the wider industry and financial analysis of options for improving the family's position. RBS engaged EconSearch to carry out an independent evaluation of the Program including a cost benefit analysis of quantifiable and qualitative benefits.

QUANTIFIED RESULTS

The net present value (NPV) of the Program after 10 years with a discount rate of 6 per cent is expected to be \$5.45 million. The internal rate of return (IRR) is expected to be 40 per cent and the benefit cost ratio (BCR) 2.4 over the same period. The results of the cost benefit analysis of quantifiable benefits are presented in Table ES-1. These results indicate that the Program can be expected to lead to a more efficient allocation of resources compared to the status quo.

Table ES-1 Results of the cost benefit analysis after 10 years ^a

	Decision Rule	Standard Assumptions (Program cost \$485k)	Excluding R&D (Program cost \$300k)
NPV (\$m)	if > 0	5.45	5.64
IRR	if > 6%	40%	45%
BCR	if > 1	2.4	2.5

^a Of the 30 dairy families engaged, 5 families dropped out following the Murray Goulburn announcement, 25 completed the Program and 20 completed the evaluation surveys. This provided 19 pairs of quantitative farm level observations and 39 pairs of qualitative individual level observations. The sample is considered representative as its characteristics are similar to that of the state, such as average herd size and milk production (Section 4.4)

Source: Appendix Table 1-1 and Table 5-8

The results of the cost benefit analysis at 10 years after removing one-off R&D costs are an NPV of \$5.64 million, an IRR of 45 per cent and a BCR of 2.5. This represents the expected result of delivering the Program in the future in a similar context given that some one-off costs won't be repeated.

Sensitivity analysis

The sensitivity analysis suggests that the results of the cost benefit analysis would be positive under various combinations of unfavourable assumptions such as exaggerating the Program and on-farm investment costs and halving the expected on-farm expenditure savings and income increases. While the results in Table ES-1 are sensitive to the accuracy of expectations of farming families, NPV remains positive across a reasonable range of expectations. For example, in a simulation that modelled the 10,000 most likely alternative sets of values for the assumptions, 95 per cent of the sets resulted in a 10 year NPV between \$1.98 million and \$7.42 million.

On-farm investment

The 19 respondent dairy farming families indicated in the post-Program survey that they intend to invest a total of \$3.65 million between 2016/17 and 2020/21 that they would not otherwise have invested. The main categories of investment identified were: creating or upgrading infrastructure such as fences, water, shade, sheds and dairy to expand production, reduce input costs or change enterprise mix; and land purchases to expand production or avoid on-going lease costs.

Bank investment and attitudes

The respondent dairy farming families expect to borrow \$2.7 million to make the investments they identified. Responses from the individuals involved in the Program indicated that those who were dissatisfied with their bank/financier became more satisfied with them over the course of the Program. Comments from respondents identified finding new ways to finance investments as a benefit of the Program.

QUALITATIVE RESULTS

The responses indicated an improvement in satisfaction with 10 out of 11 aspects of participants' work and life from before to after the Program. Respondents reported change in various aspects of financial literacy including: confidence, knowledge and skills in strategic awareness; best practice and research adoption; and access to organised information. Over 80 per cent of participants indicated an improvement for each.

Production

On average, farming families increased their expectations of their milking area size, milking herd size, employment and milk production in three years compared to their expectations before the Program.

Implementation

Respondents indicated their intentions to engage outside assistance to implement the intended changes.

Accountants, bank managers, private farm production consultants and Dairy Australia extension team members were identified most frequently by respondents. Families identified private farm production consultants, private financial consultants, government farm business advisors and government officials as services that will be new to their farm.

Program evaluation

All respondents indicated that they were satisfied with the Program and three quarters would recommend it to a friend or neighbour. Face to face time spent with consultants and getting an outside perspective on the business were identified as the most useful aspects of the Program. Respondents were given the opportunity to comment on the Program and elaborate on any of their answers throughout the survey. Five representative statements were drawn from the comments of the group on the whole:

1. ***Access to organised information*** – Learning how to break down your financials and take control of your book keeping seemed intimidating at first but was very useful. It helps you to understand the workings of your business and to identify which parts of it you need to focus on, such as input costs.
2. ***Awareness of farms' financial position*** – Once you understand the workings of your business you can see where you're heading financially. You might then tweak things a little, make big changes, or just gain confidence that you're on track.
3. ***Awareness of business' financial position relative to industry*** – Comparing your business to the industry highlights where you're doing ok and where you can improve. It also shows where the whole industry is struggling in a similar way to you.
4. ***Confidence in adopting best practice*** – The Program helped to identify where we should be investing our time and money on the farm and gave us confidence to make changes that we had considered before but not yet carried out.
5. ***Confidence in implementing research*** – Identifying different ways to improve our farm and new strategies gave us confidence to grow our business.

Industry Leaders

The responses showed that industry holds a positive view of the Program and expects positive impacts, contingent on successfully engaging the farming families. The industry leader survey captured the views of 26 industry leaders on the Program. The greatest positive impacts are expected in the areas of 'financial literacy' and 'strategic awareness'. These impacts are expected to result directly from the training provided through the Program. Smaller positive impacts are expected in the areas of 'adoption of best practice' and 'research adoption'. These impacts are generally expected to occur indirectly, as a result of increased 'financial literacy' and 'strategic awareness'.