Farmer learning and extension – The Beef + Lamb New Zealand approach

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Introduction

While the sheep and beef sector has faced considerable challenges over recent times, it remains New Zealand's second largest primary industry and export sector, contributing over $7 billion to the New Zealand economy each year. Importantly, the Red Meat Sector Strategy (RMSS), released in May 2011, defined a suite of initiatives that could be employed to grow the sector's economic contribution, and also to improve the profitability of all participants in the red meat value chain.

Amongst these initiatives was the need to focus on maximising the uptake of 'best practice' throughout the sector, and particularly the opportunity provided through a continued move towards the use of best practice behind the farm gate.

Beef + Lamb New Zealand (B+LNZ) is the industry organisation for the New Zealand sheep and beef sector. This paper outlines B+LNZ's work to support the further implementation of best practice on farm, through the creation and delivery of farmer-focused tools and services to support decision-making in the farm business.

Discussion

Productivity improvement

Significant change occurred in the New Zealand pastoral sector following the agricultural and broader economic reforms of the 1980s. More specifically, the number of farms declined, with the remaining farms being larger, and there being considerable improvement in a range of key productivity metrics for pastoral farming (see Tables 1 and 2).

The productivity changes across many metrics during the period shown are impressive and arise as a result of a combination of factors, including improved nutrition, genetics, animal health management and farm systems. Overall, this has seen an increase in production of 175% from the dairy sector and a 17% increase in beef and veal production. While there has been a 7% reduction in the volume of sheepmeat production, this comes from 46% fewer sheep than in 1990-91.

Table 1 Change in dairy and sheep and beef (S&B) farm scale in the period 1990-91 to 2012-13.

	1990-91	2012-13p	
Commercial S&B Farms	19,600	12,370	***-37%***
Av Stock Units	3,415	4,155	***+22%***
No of Dairy Herds	14,685	11,891	***-19%***
Av Cows at peak	164	402	***+165%***

A wide distribution of profitability

While the productivity 'story' has been impressive across a range of measures over the last two decades, analysis of on-farm profitability highlights a wide variation across farms on a per-hectare basis (see Figure 1). While the exact relationship between years varies depending on the years chosen for the analysis due to the impact of season and product price (it should be noted that in the 2011-12 year shown in Figure 1, inflation adjusted sheep and beef farm returns reached their highest level since 1972-73), variation in profit across the sector does not appear to have decreased, and some year-on-year comparisons suggest it may have increased. Figure 1 also notes the shift in the production base for the sheep and beef sector, with changing land use, principally dairy conversion, seeing the sector increasingly reliant on hill country farming systems.

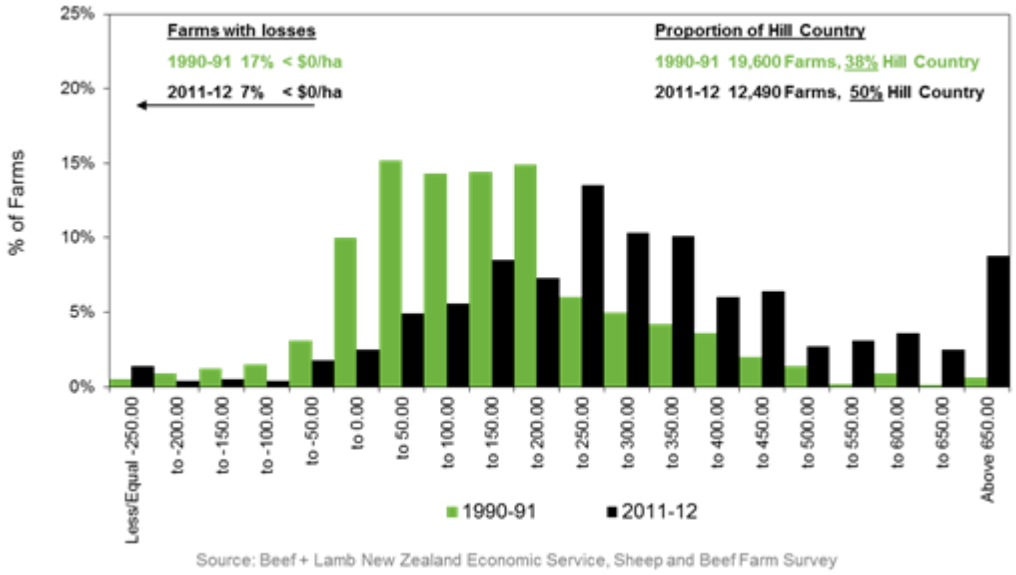
Table 2 Change in key farm productivity metrics in the pastoral sector in the period 1990-91 to 2012-13.

	1990-91	2012-13p	
Lambing Percentage (ewe)	100.4%	123.3%	***+23 lambs***
Hogget lambs as % all lambs	-	5.4%	
Average Lamb Carcase kg	14.35	17.88	***+25%***
Lamb sold (kg/ewe)	9.76	18.06	***+85%***
Wool Prodn (kg/head greasy)	5.28	5.41	***+3%***
Average Steer Wt (kg)	297	309	***+4%***
Milksolids per cow (kg)	260	340*	***+31%***

In addition to the measured profit variation, various analyses and anecdotal reporting suggest uptake of a range of key proven technologies is sub-optimal, and the RMSS noted the need for farmers to focus closely on those issues within their control to change (e.g. reproduction, fertiliser application, nutrition), rather than those factors impacting the sector but not within farmer control (e.g. product price, weather).

Given this, there is a significant opportunity for farmer learning and extension to yield significant benefit, through improved focus and uptake of those tools and management techniques that can

Figure 1 Inflation-adjusted analysis of per hectare profitability in the sheep and beef sector, comparing the 1990-91 and 2011-12 seasons.



best deliver the levels of profitability seen by the highest performing farms. Such shifts in the placement of an individual farm on the profitability distribution shown in Figure 1, can contribute tens of thousands of dollars of additional profit to the individual farm, and given the scale of the sector, this can aggregate to hundreds of millions of dollars across the sector if achieved at scale.

The B+LNZ approach

Since 2010, B+LNZ has significantly increased its focus on farmer learning and extension, creating a farmer-driven co-creation model for its extension delivery. Different extension events and tools focus across three areas driving towards the ultimate goal of positive practice change on-farm. These are:

- Awareness via printed media, email, publications, 'Fact Sheets', 'R&D Briefs', text message alerts
- Knowledge via seminars, field days and other training
- Practice change via 'hands on' workshops, on-farm small groups, and targeted training responding to regulatory requirements

Importantly, the content of the various events and tools and the mix of delivery in a region is determined by a regional B+LNZ Farmer Council (there are seven Farmer Councils throughout New Zealand), with each Farmer Council comprising approximately 15 local farmers and some other key service providers (e.g. farm management consultants, scientists etc). The local B+LNZ farmer-elected Director is also a member of the local Farmer Council, with the various elements aligning as shown in Figure 2.

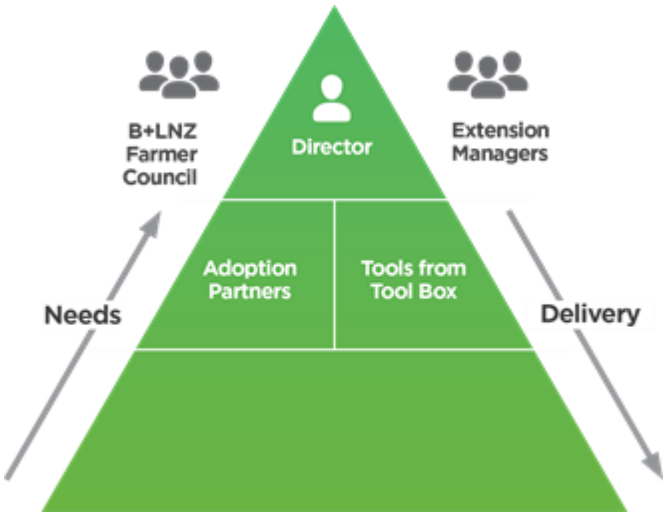
Other key elements to B+LNZ's regional extension model highlighted in Figure 2 include:

- The flow of identified 'needs' from farmers up to the Farmer Council to create new and revised tools and services which are then delivered through B+LNZ programmes
- The inclusion of adoption partners, often specialist agribusinesses and individuals, who bring skills and insights to assist both the creation and delivery of tools and services. This can cover both technical farm management and farm business management
- The opportunity for Farmer Councils to draw from a suite of tools and services from a 'tool box' of models and programmes, each with an array of resources to promote them. Example tools from the 'toolbox' include Monitor Farms, Demonstration Farm, and Beef Profit Partnerships
- The integration of the local B+LNZ Extension Manager (staff) into the Farmer Council's operations to enable effective delivery

Broadening the approach

A key point of feedback from many farmers is the confusing and often conflicting array of information received from a variety of sources on many issues. This 'noise' can contribute to poor or no decisions being made on key issues which impact on the farm business. Given this, B+LNZ has recently joined with six meat processors, two banks, and the New Zealand government through the Primary Growth Partnership to examine ways to develop a more co-ordinated and networked approach to farmer learning and extension, and the effective creation and delivery of a range of information through such a network. The project is known as the Red Meat Profit Partnership.

Figure 2 Linkage and information flow to support B+LNZ's regional extension delivery.



Summary and conclusion

The creation of the Farmer Council driven regional extension model has been a significant and successful development for B+LNZ over recent years. It has created significant regional tailoring of programmes across the country, with much greater diversity seen in the annual programme of activity between regions, and a significantly increased response from farmers in terms of their engagement and participation, since the programme was put in place.