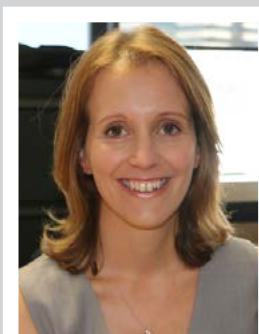




## Justine's Desk



Having been back in the Director's seat for PGP for a month now, I am starting to build a picture of the great progress programmes have made over the past year. This of course hasn't been without its challenges – or we wouldn't be in the business of innovation.

Evidence of this progress can be seen in the now steady stream of media stories covering PGP programmes. These aren't limited to just what programmes are directly delivering but on wider spillover benefits, such as developing skilled people. For example, the Transforming the Dairy Value Chain programme is working with NZ Farmer on a series of profiles about some of those involved with the programme. This includes profiles about [Andrew Scott](#), Project Manager, Research and Development, at the Livestock Improvement Corporation and DairyNZ's [Logan Bowler](#).

The programme also developed a [story](#) about the dairy industry's search for the 'sweet spot' where cutting-edge science meets commercial vision.

And speaking of dairy, in this month's Agri-gate we profile the Whai Hua – New Dairy Products and Value Chains PGP programme, and the work they're doing to develop immune-enhancing dairy milk products.

Earlier this month we released a summary report of the interim evaluation of the New Zealand Sheep Industry Transformation (NZSTX) programme. NZSTX has a further 18 months to run before it is completed. This review is an interim review of progress towards achieving outcomes from two of the completed projects from the programme.

Overall, the independent evaluation found that significant further progress had been made in the NZSTX programme's fibre and meat projects, when assessed against the expected outcomes in the programme's Outcome Logic Model.

It also concluded that fine and mid-micron wool has "remained remarkably resilient" with contract wool sold under the NZSTX programme increasing by around 6 percent over the last five years, compared with a reduction in the supply of coarse wool of 34 percent over the same period.

It also concluded that the programme has, with Silver Fern Farms, developed a branded, high value product

(Silere Alpine Origin Merino) where sales have been increasing year on year.

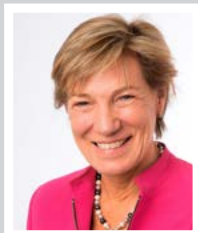
The review concluded that there is still some progress needed to meet the NZSTX's aim of increasing uptake of Fit-for-Market products and processes. However, the reviewers believe that the ability of the programme to meet its medium to long term outcomes are favourable.

A copy of the summary report for the interim evaluation is available on our [website](#). A full evaluation will be carried out at the end of the programme.

Looking ahead, the National Fieldays are on from 15 – 18 June, and this year we'll be setting up a site specifically about the PGP, located beside MPI's site. Our PGP site will explain what the PGP is all about, how it's making a difference across our primary industries and examples of some of the great innovations delivered or currently underway. And many PGP programme partners will be having sites of their own at the Fieldays where some of the great innovations underway in their programmes can be showcased.

Justine Gilliland  
Director Investment Programmes

## From the Chair



Last month I focused on the importance of the commercialisation phase of each programme to its ultimate success.

I wanted to carry on with that theme this month. Justine refers to the independent interim evaluation of the NZSTX programme. When the Independent

Advisory Panel (IAP) reviewed this report, in our monitoring role, we were particularly drawn to one particular finding articulated in the report:

“The drivers of high end customer purchase decisions are initially the quality of the design, colour and feel of the product. This is then justified by the story behind the product that embodies environmental sustainability, animal welfare, trace back to ethical farming practices and identifying with the farmers thus linking the source of the raw material to the finished product.”

This to me reflects the same view that I expressed last month around the importance of commercialising each PGP programme. And why the PGP is aimed at the whole value chain.

Last month I referred to the commercialisation phase at the end of the programme. However, it is really important that the “drivers of high end customer purchase decisions” is understood and linked to the programme, either at the proposal stage, or at a very early stage once it begins.

It must be becoming clear that this area is one of the focuses of the IAP this year, whether in our proposal assessment role or our monitoring role. I encourage all partners or potential partners to focus on this area.

Joanna Perry  
Chair, Investment Advisory Panel

# New Dairy Products and Value Chains

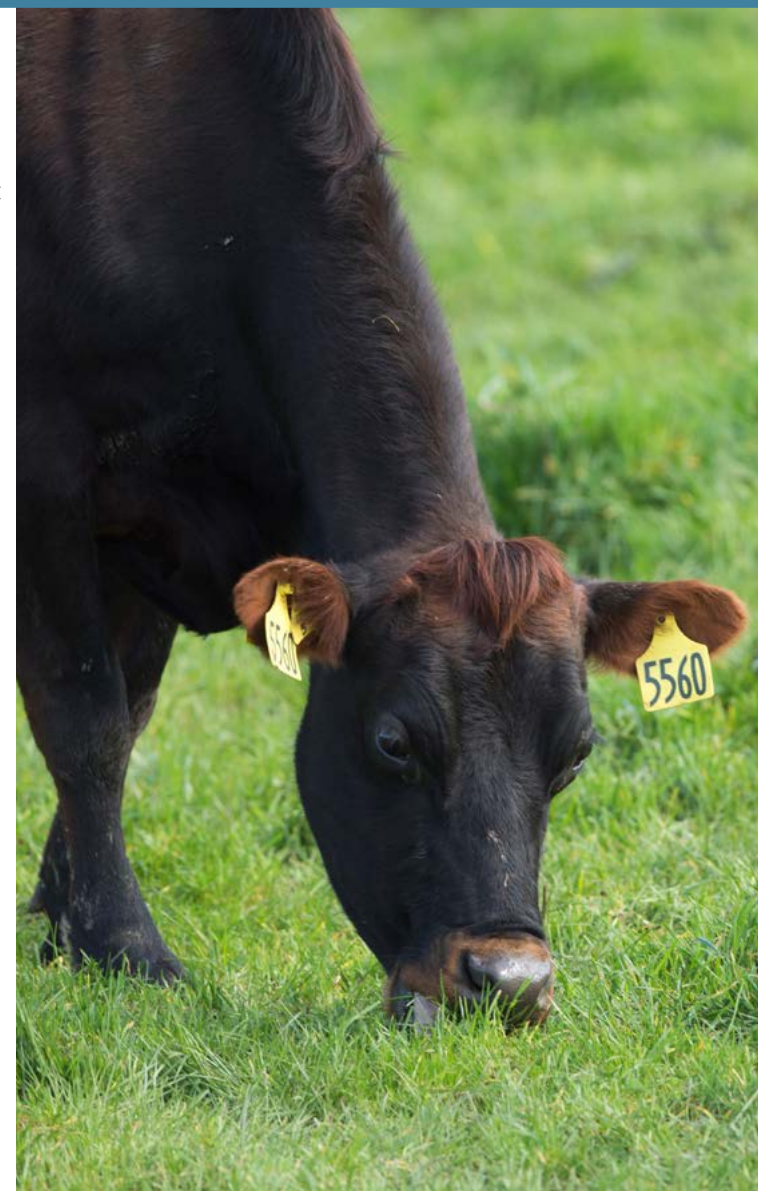
The New Dairy Products and Value Chain PGP programme, led by Whai Hua, is a joint partnership between Wairarapa Moana Incorporation, Miraka Ltd and Kanematsu New Zealand. It was last profiled in Agri-gate in December 2014 and, since then, it has achieved a number of milestones as it nears its completion in June 2016.

WMI is a large-scale Māori agribusiness that farms 10,000 dairy cows at Mangakino, and Miraka is a dairy processing company based in the central North Island. Kanematsu, a Japanese trading company, is an in-market partner and has a long standing involvement in marketing the kind of specialised dairy products which are being developed in the programme.

This \$4 million, 3 year programme, which started in 2013 aims to develop and take to market new immune enhancing dairy products which will be sold as health food ingredients in domestic and offshore markets.

“Our products will be based on milk compounds that occur naturally within New Zealand dairy herds and/or probiotic products which result from vaccinating cows using specific antigens, or in other words molecules that induce an immune response,” says Kingi Smiler the chairman of Whai Hua.

“Dairy ingredient products that seek similar outcomes are often based on colostrum powders or lactoferrin. The market for these kind of immune enhancing products is growing, particularly in Asia in parallel with emerging prosperity in that region.”





The programme includes five integrated work streams:

1. Gathering scientific evidence to demonstrate that the milk compounds act in a similar manner to those in human milk. This is essential to support our product functionality claims and when engaging with in-market partners.
2. Creating an elite herd of cows which can be scaled-up to produce a consistent supply of naturally occurring immune enhancing compounds.
3. Developing a probiotic product through safe and effective vaccination of cows.
4. Developing proven procedures for processing milk which enable it to retain its immune enhancing properties.
5. Market research and development.

Gavin Sheath, Whai Hua's Programme Manager, says the programme has made very good progress towards achieving its objectives.

"Based on our work, we're confident around the efficacy of the target immune enhancing compounds in the milk," he says.

"We've established an elite herd of cows on WMI's farm which can be scaled up to produce a consistent supply of naturally occurring product. Our vaccination of cows has resulted in the specific immune responses we're seeking, but development of a safe and effective immunisation protocol will require further research and development.

The programme has also developed a protocol for processing the immune-enhancing milk that retains the high levels of the active ingredient identified by Whai Hua and this is now being tested at a commercial scale.

"The market opportunities for the products we're developing are well understood and encouraging interest has been shown from potential customers," says Gavin.

However, we still have several important milestones to complete before the programme finishes in June," says Gavin. "Once these are completed we can move forward with confidence with our partners to commercialise the products".

Kingi is confident that a successful outcome will achieve sales worth \$8.5 million per annum to New Zealand's economy within five years and will provide other important benefits for the dairy industry in New Zealand.

"For Miraka it will result in additional resilience for the business and its shareholders through diversification into higher valued products, which represents 15 to 20 percent of its business," he says.

"For Wairarapa Moana and Miraka farmers who supply milk for these products it will mean a higher dairy pay-out."

"PGP investment has been critical to achieving the momentum needed to drive this programme forward and achieve the progress to date," says Miraka CEO Richard Wyeth.

"Investing in innovations that lead to value-added products is the best way of helping protect farmers and dairy companies from the uncertainties and price volatility of the commodity market," says Richard.

"Successful commercialisation in this programme will give the company confidence to pursue other added-value strategies."

Kingi says the programme should generate other important benefits including improving the confidence and capability of other Māori agri-businesses to invest in new value chains and opening up international market pathways for dairy health food ingredients.



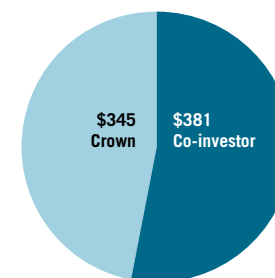
## Overview of Primary Growth Partnership Investment

Sector	Programme Name and Co-investor	Total Crown and co-investor investment \$ million	Sector total \$ million	Estimated benefits \$ million (per annum)
Wool	NZ Sheep Industry Transformation (NZSTX) NZ Merino	34		885
	Wool Unleashed (W <sup>3</sup> )	22	\$56	
Dairy	Transforming the Dairy Value Chain Dairy NZ/Fonterra	170		2700
	New Dairy Products and Value Chains Whai Hua Limited Partnership	4	\$174	9
Fishing & Aquaculture	Shellfish – The Next Generation Shellfish Production and Technology NZ (SPATnz)	26		81
	Precision Seafood Harvesting Precision Seafood Harvesting (PSH)	48	\$74	44
Meat	FoodPlus – Redefining Meat Horizons ANZCO	58		200
	Marbled Grass-fed Beef Grass-fed Wagyu Ltd	23		80
	Red Meat Profit Partnership Red Meat Profit Partnership (RMPP)	64		194
	Integrated Value Chain for Red Meat Farm <sup>1a</sup>	151		1100
	Omega Lamb (formerly Targeting New Wealth with High Health)	25		TBA
	NZ Deer Industry Passion2Profit	15	\$338	TBA
Pastoral	A New Vision for Pastoral Agriculture PGG Wrightson Seeds	15		200
	ClearView Innovations Ballance AgriNutrients	20		348
	Precision Application of Fertiliser in Hill Country Ravensdown Fertiliser Co-op Ltd	10	\$44	120
Bee Keeping	High Performance Manuka Plantations Manuka Research Partnership (NZ) Ltd (MRPL)	3	\$3	1200
Forestry	Innovative Steep-land Tree Harvesting Future Forests Research (FFR)	7		100
	Use of Fumigants for Log and Wood Product Exports Stakeholders in Methyl Bromide Reduction (STIMBR)	2.6 (actual cost)		TBA
	From Stump to Pump Phase 1 (feasibility study) Norske Skog Tasman Ltd (NSTL)/Z Energy	3.6 (actual cost)	\$13	TBA
Wine	Lifestyle Wines New Zealand Winegrowers	17	\$17	285
Horticulture	NZ Avocados Go Global Avocado Industry Council	9	\$9	210
<b>Total</b>			<b>\$727</b>	

Please note that the figures in this table have been rounded. Therefore the total Crown and co-investor investment for each sector may differ to the sum of the individual programmes.

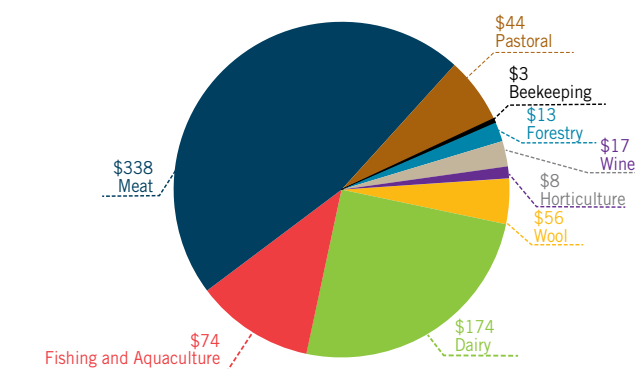
As at 29 February 2016, there were 19 programmes underway and two completed.

### Crown/co-investor committed investment (in millions)



### Crown/co-investor committed investment by sector (in millions)

Total \$727 million



Total government funding paid to programmes as at 29 February 2016 was \$178.8 million.