

Agri-Gate

Ministry for Primary Industries
Manatū Ahu Matua



News from the Primary Growth Partnership

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Justine's Desk



The last month has been another busy one for the PGP.

On 1 April, we announced the latest PGP programme to join the fold: New Zealand Avocados Go Global. The programme's vision is to equip the industry with the tools to triple productivity to 12

tonnes per hectare and quadruple industry returns to \$280 million by 2023. This will mean addressing the industry's biggest challenge of low and irregular bearing. Collaborative research, with strong cross industry participation will deliver best practice across the value chain, transferred through a network of innovation leaders, rural professionals and growers. The programme includes co-investment from growers, packers, processors and exporters – a real cross-industry collaboration.

Also on 1 April, we opened our tenth funding round. Proposals are due to MPI by 12pm on 25 June 2014 and we look forward to receiving proposals that will help drive innovation and growth across primary industry value chains. MPI is available to provide advice on PGP criteria and we're happy to talk with interested parties about their ideas and whether they might meet the criteria for PGP investment. Having these

discussions as early as possible in the process means parties that are planning to submit proposals can save time and effort by knowing early on whether or not their proposals are likely to meet PGP criteria.

Our first PGP programme progress review has now been completed. Looking at the New Zealand Sheep Industry Transformation project – or NZSTX, the progress review provided an independent assessment of how the programme is tracking towards its goals and recommendations on key matters to focus on.

The review team (led by PWC) concluded that NZSTX is a worthwhile programme that has potential to substantially transform the New Zealand sheep industry and improve economic outcomes in the sector. The review highlighted the significant value of the project and the substantive progress that has been made in the long-run programme. It also found that NZSTX has effective governance, management and decision-making. The review has made a number of recommendations to assist the programme with tracking its progress, meeting its goals, and therefore delivering the expected economic benefits for New Zealand.

MPI and NZ Merino (as the programme co-investors) are currently considering the recommendations of the review panel and will include any resulting actions in the 2014/15 business plan for the programme. A report on the progress review is available on the NZSTX programme page on our website.

On 3 April 2014, we held our first Partners' Workshop. This was a result of discussions at the 2013 PGP Annual Meeting last September, where programmes expressed interest in continuing the collaborative conversations, connecting with each other, sharing information, and following up on actions that were generated at that meeting. The Partners' Workshop involved over 70 participants from PGP programmes and government, and covered topics such as: the economic and wider benefits of PGP programmes; effective ways to manage PGP programmes; collaborating on complex areas such as technology transfer (or extension) and data-sharing; and how to measure progress towards outcomes. A number of work streams will now pick up on these themes to develop them further and will report back at our 2014 PGP Annual Meeting in September.

Over the next month, we expect the New Zealand Institute of Economic Research to complete its analysis of the benefits of the PGP. This will provide an overall view on the potential of the PGP as a whole in driving New Zealand forward – based on current and potential future programmes.

Justine Gilliland

From the Chair

I There have been a number of examples of significant innovation and achievements by PGP programmes recently which I'd like to mention:

- The Precision Seafood Harvesting programme was nominated for a KiwiNet Research & Business Partnership Award;
- Shellfish Production and Technology New Zealand Ltd (SPATnz) reached a milestone in its journey towards selective breeding of GreenshellTM mussels, with scientists now nurturing 80 “families” of hatchery-produced baby mussels (spat) – a crop of selectively bred mussels was also successfully transferred to a marine farm in early April;
- Livestock Improvement Corporation (LIC) has discovered a “fat gene”, providing a genetic explanation as to why some cows produce higher fat content in their milk than others – this is one of only a few cases worldwide where the underlying gene affecting differences in milk composition has been identified, and is part of the Transforming the Dairy Value Chain PGP programme led by Dairy NZ and Fonterra;
- Silver Fern Farms launched a new retail beef range – the first retail red meat range in New Zealand to be underpinned by the science-backed Silver Fern Farms Eating Quality System, part of the FarmIQ programme; and
- The Steepland Harvesting programme has commercialised its ClimbMAX harvester, with four now operating in Nelson, Hawke's Bay and British Columbia in areas considered dangerous for conventional tree felling and extraction

practices. A fifth machine is currently under construction, and two improved Alpine Grapples have been sold in New Zealand.



To me, these are fantastic examples of what the PGP is all about: smart ideas, smart action and smart results; taking our primary sector to a new level; and growing New Zealand's future.

As part of the very successful PGP partners' workshop on 3 April, part of the discussion was focused on how we're able to assist New Zealanders to understand what PGP is and why it's good for New Zealand. The examples above clearly begin to demonstrate the value that PGP delivers.

At our IAP meeting earlier in April, we reviewed a number of quarterly reports and revisited our Terms of Reference to ensure we continually keep this in mind. We also met with a programme in advance of finalising its annual plan to discuss areas of future work.

Lastly, we farewell Jamie Tuuta from the IAP. Jamie has been a member of the IAP since the launch of the PGP. He has added real value to the IAP during that time, providing really insightful and knowledgeable comments in all of our deliberations. And there is no doubt Jamie has a real desire to do what he can do to assist in growing New Zealand's future. We will miss his contribution enormously and wish him all the best in his many other endeavours that are focused on growing New Zealand's future.

Joanna Perry

Programme Spotlight

STIMBR on the long road to success

The Stakeholders in Methyl Bromide Reduction (STIMBR) PGP programme was one of the early birds in the Primary Growth Partnership. In 2010 STIMBR partnered with MPI to commence an ambitious and innovative research programme seeking alternative phytosanitary (plant health) treatments for methyl bromide – a natural, but ozone depleting, substance used to fumigate forest and horticultural products, as well as imported commodities and possessions.

The Montreal Protocol – an international agreement – requires all countries to reduce their use of methyl bromide. The Environmental Protection Agency (EPA) reassessed methyl bromide in 2010 and imposed strict controls on its use – by 2020 they require the recapture or destruction of all excess methyl bromide following fumigation. In order to negotiate revised phytosanitary agreements with trade partners in time for the EPA's 2020 deadline, STIMBR is aiming to have its research results available by 2018.



STIMBR on the long road to success continued



The STIMBR PGP programme arose from the need to identify and develop phytosanitary treatments and associated technologies to allow New Zealand's log exports to continue and optimise year round demand for the supply of fruit and vegetables to a number of countries. STIMBR is working closely with Crown Research Institutes, Scion and Plant and Food, and other researchers.

To support the research effort significant advances have been made in establishing colonies of the insects that reproduce in captivity – this ensures that the numbers of insects needed for research purposes are available. Prior to the start of the STIMBR programme, research was constrained by difficulties with relying on wild caught insects.

The STIMBR programme's analysis has shown that the methyl bromide rates required by China, Japan and Korea could be significantly reduced with no loss of efficacy against target pest species. Efficacy data is now being developed, with funding by STIMBR and the Ministry for Business, Innovation and Employment (MBIE) to confirm the potential to reduce methyl bromide rates for New Zealand export logs, and provide a basis for comparing the efficacy and economic viability of potential alternative treatments, including other fumigants. Proving that

reducing and standardising methyl bromide fumigation rates, has the potential to reduce fumigation costs (per cubic metre of logs), at a time when log volumes and therefore methyl bromide usage would be increasing. Technologies to capture or destroy methyl bromide will also benefit from lowering its rate of use.

The science involved is challenging and complex – it requires innovative thinking. A number of parties have identified potential alternatives to methyl bromide, however the STIMBR PGP programme has established that only one – Ethanedinitrile (EDN) – may be a suitable alternative. EDN isn't currently available in New Zealand, is a potentially expensive alternative, and its efficacy has yet to be proven.

STIMBR has preliminary trials of EDN underway which indicates that the absorption of EDN by wet and kiln dried timber is similar. Further work is being completed to determine if research is warranted to fully evaluate the efficacy of EDN.

The STIMBR programme has developed a model for standardising all efficacy data – this ensures that robust data is gathered about different fumigants and is able to be compared.

The programme is making good progress with investigating safe alternative fumigant technologies. Plant and Food Research is evaluating the use of Ethyl formate and ozone for use with kiwifruit.

Also Scion is developing a novel substrate – or molecule – that has the potential to destroy methyl bromide. The resulting residue is not toxic and has potential uses in other chemical processes. This technology may have uses in facilities where methyl bromide is used or cool stores where treated products are stored. The programme is aiming to deliver a report of its research

findings including an assessment of the cost of manufacturing the product by June 2014.

Studies completed by the programme show that recapturing and recycling methyl bromide is technically feasible. Beyond the PGP programme, STIMBR is currently considering funding options to build and commission a prototype system to use on stacks of logs and in ship holds.

The EPA has set controls for methyl bromide that require buffer zones around fumigation operations. As part of the PGP programme, Scion has developed a model that could be used to predict the plume associated with fumigation – information from this model will allow the EPA to validate and – if required – modify the buffer requirements.

Joule heating technology is a concept that has been proven to have the potential to kill insects in and on logs. Further work is now underway developing this system under a project co-funded by the STIMBR, MBIE and Scion.

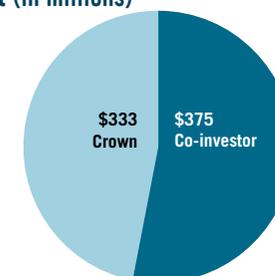


Overview of Primary Growth Partnership Investment

For 18 Announced Programmes as at 1 April 2014

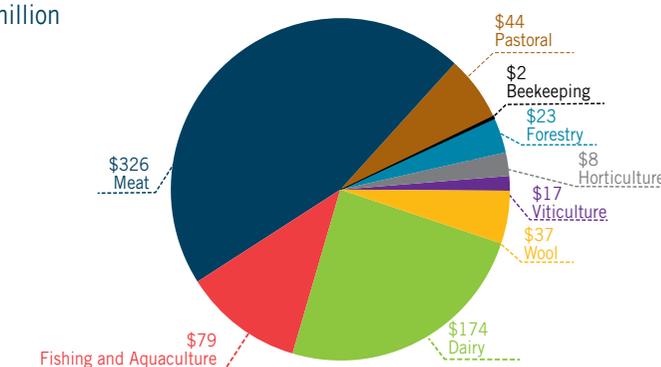
Sector	Programme Name and Co-investor	Total investment \$ million	Sector total \$ million	Estimated benefits \$ billion
Wool	NZ Sheep Industry Transformation (NZSTX)	37	37	0.25
	NZ Merino			
Dairy	Transforming the Dairy Value Chain	170		2.7
	Dairy NZ/Fonterra			
Fishing & Aquaculture	New Dairy Products and Value Chains	3	173	0.0086
	Whai Hua Limited Partnership			
Fishing & Aquaculture	Shellfish – The Next Generation	26		0.081
	Shellfish Production and Technology NZ (SPATnz)			
Meat	Precision Seafood Harvesting	53	79	0.0436
	Precision Seafood Harvesting (PSH)			
Meat	FoodPlus – Redefining Meat Horizons	87		0.63
	ANZCO			
Meat	Marbled Grass-fed Beef	23		0.08
	Grass-fed Wagyu Ltd			
Meat	Red Meat Profit Partnership	64		0.194
	Red Meat Profit Partnership (RMPP)			
Meat	Integrated Value Chain for Red Meat	151	325	1.1
	FarmIQ			
Pastoral	A New Vision for Pastoral Agriculture	15		0.2
	PGG Wrightson Seeds			
Pastoral	ClearView Innovations	20		0.348
	Ballance AgriNutrients			
Pastoral	Precision Application of Fertiliser in Hill Country	10	44	0.12
	Ravensdown Fertiliser Co-op Ltd			
Beekeeping	High Performance Manuka Plantations	2	2	0.925
Beekeeping	Manuka Research Partnership (NZ) Ltd (MRPL)			
Forestry	Innovative Steep-land Tree Harvesting	7		0.1
	Future Forests Research (FFR)			
Forestry	Use of Fumigants for Log and Wood Product Exports	3		-
	Stakeholders in Methyl Bromide Reduction (STIMBR)			
Forestry	From Stump to Pump Phase 1 (feasibility study)	14	23	-
	Norske Skog Tasman Ltd (NSTL)/Z Energy			
Viticulture	Lifestyle Wines New Zealand Winegrowers	17	17	0.29
Horticulture	NZ Avocados Go Global	8	8	0.11
	Avocado Industry Council			
Total			708	

Crown/co-investor investment (in millions)



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

Total \$708 million



Total benefits by sector (in billions) per annum by 2025

