



Primary Growth Partnership



Smart ideas, smart action, smart results

May 2017

GROWING AND PROTECTING

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Front cover photo of the flying sheep courtesy of the Red Meat Profit Partnership.

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Business-led, market-driven primary industry innovation

The primary industries are the engine room of New Zealand's economy, contributing more than \$23 billion annually.

The Primary Growth Partnership (PGP) is the Ministry for Primary Industries' (MPI's) flagship investment programme. It enables partnerships between MPI and New Zealand's food, beverage, fibre and other industries. The aim is growing New Zealand through boosting value, productivity, profitability and sustainability across our primary industries.

Investing in PGP programmes provides the opportunity for the primary industries to carry out ambitious, and often risky, innovation programmes that will deliver significant long-term growth. The investment and risk would be too high for an organisation to bear on its own.

PGP programmes continue to deliver real and tangible benefits for New Zealand's primary industries. Many examples are available on MPI's website at www.mpi.govt.nz/pgp, keywords 'Primary Growth Partnership' or scan the QR code.



Photo courtesy of The New Zealand Merino Company Ltd

Economic Growth

There are more than 50 companies involved in the PGP programme portfolio. Everyone involved with the PGP is committed to New Zealand's long-term, sustainable prosperity, with MPI and industry currently committing more than \$750 million over the life of 22 PGP programmes currently in the portfolio. This is in addition to a significant amount of time, expertise, knowledge and effort.

PGP programmes span New Zealand's food, beverage and fibre industries. The PGP is accelerating change and the combined, collaborative effort is making a difference to our economy.

The PGP is independently estimated to contribute around \$6.4 billion to New Zealand's GDP from 2025. This represents an estimated 32:1 return on Government's investment.



Cutting-edge innovation

PGP programmes must push the envelope in terms of innovation, rather than simply improving what New Zealand companies already do. They must stretch thinking and look for newer and better ways of achieving outcomes for the environment, the economy and society.

PGP programmes are delivering value-added products and services, cutting-edge science, research and development, and new technology. What's more, they're building capacity and capability throughout the primary industries; they're helping to protect our environment; they're creating jobs; and they're keeping people safe.

Governance and monitoring

The Ministry for Primary Industries manages and oversees the PGP with advice and guidance provided by an independent Investment Advisory Panel (IAP).

The PGP has strong governance processes in place to give confidence and assurance in PGP investment and ensure programmes have the best possible opportunity for success.

Each PGP programme is governed by a Programme Steering Group, which includes at least two MPI representatives, and most have an independent chairperson. Reporting, independent reviews and other measures also contribute to strong governance for PGP programmes and the PGP as a whole.

Application process

The PGP process is designed to encourage new ideas from industry, and specifically from businesses. You can submit new PGP programme proposals at any time.

Industry co-investors must contribute at least 60 percent of the investment, with MPI contributing 40 percent¹.

The minimum amount that industry co-investors need to contribute is \$500,000 (excluding GST) over the life of the programme. This means that the total value of a programme must be at least \$833,333 over the life of the programme (i.e. a minimum of \$500,000 from the industry and \$333,333 from MPI).

When applying for investment, please tell us:

- your story
- your vision
- the opportunity you're targeting, or the challenges you're trying to overcome for your industry
- your plan to achieve this
- who and which parts of the value chain will play a role
- how your programme will benefit New Zealand
- compelling reasons why the Government should invest

A proposal for a new PGP programme is assessed by MPI and the IAP. If it meets the criteria for investment, you'll then need to develop a business case.

¹PGP programmes approved before 1 December 2015 were eligible for up to 50 percent MPI funding.

MPI's decision to co-invest in a new PGP programme is based on our assessment of the business case and advice from the IAP.

Before drafting a proposal, we encourage you to contact us to discuss your proposal and whether it's likely to be eligible for PGP investment. Our team can provide feedback and guidance on proposals prior to submission to the IAP.

Get in touch

If you have good, workable ideas that will address a specific primary industry challenge or opportunity, or if PGP investment will achieve greater benefits within shorter timeframes than would have otherwise been possible, email pgp@mpi.govt.nz.



The New Zealand Sheep Industry Transformation Project (NZSTX)

The challenge

Over recent decades, profitability in the strong wool and sheep meat sectors has suffered long-term decline, resulting in a large drop in the national sheep flock in favour of dairy and other production. At the same time, prices for fine wool fibre (such as Merino) have remained higher and demand from international markets for certain fine wool types has begun to outstrip New Zealand supply.

The solution

This PGP programme aims to increase production of market-driven sheep, shifting the balance between New Zealand strong and fine wool production, and using product differentiation to generate better grower returns for fibre, meat and other products. It is also improving genetic, animal health and forage outcomes.

KEY FACTS

Programme start: September 2010

Length: 7 years

PGP funding: \$16.77 million

Industry funding: \$16.77 million

Commercial partner: The New Zealand Merino Company Ltd

Estimated potential economic benefits to

NZ: At least \$250 million a year in economic benefits by 2025



W³: Wool Unleashed

The challenge

Strong wool is being sold as a commodity product and the industry has been in steady decline for the past 25 years.

The solution

This PGP programme aims to deliver premiums for New Zealand's strong wool sector. These premiums will come from applying a customer-led approach to wool production and processing to develop products that align with customer preferences.

This programme will connect farmers with consumers, promote greater collaboration within the strong wool industry, differentiate strong wool products from synthetics, develop new uses for strong wool and ensure that on-farm production practices align with consumer expectations of a premium product.

KEY FACTS

Programme start: February 2016

Length: 7 years

PGP funding: \$11.05 million

Industry funding: \$11.05 million

Commercial partner: The New Zealand Merino Company Ltd

Estimated potential economic benefits to NZ: Cumulative economic benefits for New Zealand's economy of up to \$335 million by 2025



New Zealand Avocados Go Global

The challenge

The avocado industry's biggest challenge is low and irregular bearing of fruit. This programme's vision is to equip the avocado industry with the tools to triple productivity to 12 tonnes per hectare and quadruple industry returns to \$280 million by 2023. Another challenge is New Zealand's reliance on a single export market – Australia.

The solution

This PGP programme aims to transform New Zealand's avocado industry into an efficient, well-informed, and highly capable industry, supplying premium health food to a number of high-value markets domestically and internationally. It will deliver best practice across the value chain, transferred through a network of innovation leaders, rural professionals and growers to achieve widespread adoption, driven by examples of success.

KEY FACTS

Programme start: June 2014

Length: 5 years

PGP funding: \$4.28 million

Industry funding: \$4.28 million

Commercial partner: Avocado Industry Council

Estimated potential economic benefits to NZ:

Equipping the industry with the tools to triple productivity to 12 tonnes per hectare and quadruple industry returns to \$280 million per annum by 2023



Steepland Harvesting

The challenge

The New Zealand forestry sector and the Ministry for Primary Industries have both identified steep-country harvesting as a key bottleneck to achieving greater profitability in forestry, with worker safety also being an issue.

The solution

This PGP programme aims to ensure that harvesting operations on steep terrain keep pace with New Zealand's increasing forest harvest by developing innovative forestry technology to keep forest industry workers out of harms way, while increasing productivity and lowering production costs.

KEY FACTS

Programme start: November 2010

Length: 7 years

PGP funding: \$3.7 million

Industry funding: \$3.9 million

Commercial partner: Future Forest Research Ltd

Estimated potential economic benefits to NZ:
\$100 million per year by 2025



SPAT^{NZ}

The challenge

New Zealand's Greenshell™ mussel industry struggles to deliver a consistent supply of mussels, with the characteristics demanded by premium markets, due to its reliance on wild-caught spat (baby mussels). This, and the remoteness of spat from mussel growing operations, limits the scope for growing the industry, whose products enjoy strong demand internationally.

The solution

This PGP programme is enabling selective breeding of high-value Greenshell™ mussels to give our mussel farmers and consumers the very best mussels that nature has to offer.

The research being carried out by this programme, along with its innovation in hatchery technology and enhanced capability, will be a breakthrough for New Zealand's aquaculture industry, and provide significant economic and environmental returns.

KEY FACTS

Programme start: November 2012

Length: 7 years

PGP funding: \$13.03 million

Industry funding: \$13.03 million

Commercial partner: Sanford Ltd

Estimated potential economic benefits to NZ:

\$81 million in GDP growth by 2026. If the technology developed through this programme is adopted more broadly throughout the sector, GDP could increase by \$193 million.



Precision Seafood Harvesting

The challenge

Traditional fishing nets catch a wide variety of fish sizes and species, meaning a catch can include high proportions of undesired fish or undersized fish, which can't be processed. Fish are also damaged in the process of being caught and loaded onto the deck.

The solution

This PGP programme is developing a new fishing method, the Modular Harvesting System, along with new on-board handling methods. These will assist fishing vessels to target specific species and sizes of fish, and will land fish in much better condition than traditional trawls.

KEY FACTS

Programme start: April 2012

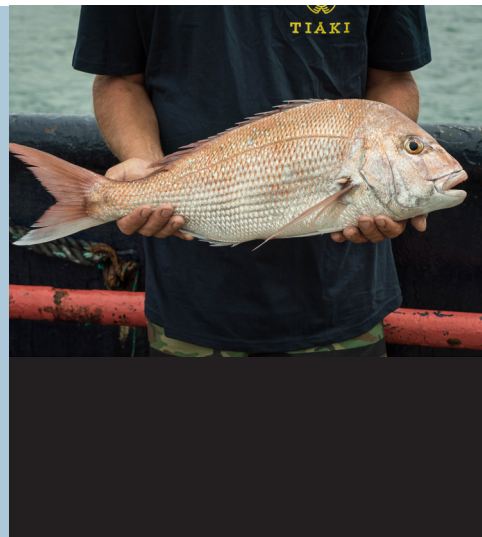
Length: 7 years

PGP funding: \$24.02 million

Industry funding: \$24.02 million

Commercial partners: Aotearoa Fisheries Limited, Sanford and the Sealord Group

Estimated potential economic benefits to NZ: \$43.6M per annum by 2025



High Performance Mānuka Plantations

The challenge

Domestic and international demand for mānuka honey and products is continuing to grow, however, the local industry is constrained by supply issues, including the unpredictability of honey yield and quality across growing regions, blocks and seasons.

The solution

This PGP programme focuses on moving mānuka honey production for medical use from wild harvest to science-based farming of mānuka plantations. Combining improved genetics with optimum husbandry practices could enable significant productivity gains for New Zealand's mānuka honey industry.

KEY FACTS

Programme start: March 2011

Length: 7 years

PGP funding: \$1.40 million

Industry funding: \$1.49 million

Commercial partners: Mānuka Research Partnership (NZ) Limited (MRPL) and Comvita Limited

Estimated potential net economic benefits to NZ: Lifting the Mānuka honey industry by an additional \$1.125 billion per year by 2028



Farm^{IQ}

The challenge

The current red meat supply chain is production-driven and inefficient. Farmers are not linked with customers and the supply chain has little ability to respond to changing consumer demands.

The solution

This PGP programme aims to create a demand-driven, integrated value chain for red meat that could grow the sector by 50 percent. It consists of a suite of projects throughout the value chain, from on-farm production systems and genetics, to processing and analysis of market requirements.

KEY FACTS

Programme start: November 2010

Length: 7 years

PGP funding: \$59.34 million

Industry funding: \$91.38 million

Commercial partners: Silver Fern Farms,
Landcorp Farming Ltd, Tru-Test Ltd

Estimated potential economic benefits to NZ:
\$1.1 billion per year by 2025



FoodPlus

The challenge

Currently a significant proportion of the red meat carcass is used for lower value products. This means that the New Zealand industry, from farmers to meat companies, is confined to commodity products which is not sustainable in the long-term.

The solution

This PGP programme is generating more value from the red meat carcass by developing new and innovative uses for different parts of the animal focusing on food (for example adding functionality and value to raw food materials); ingredients (for example stock, broths and protein supplements); and health care products (for example developing medical and surgical products from low value parts of animal carcass).

KEY FACTS

Programme start: November 2012

Length: 7 years

PGP funding: \$29.1 million

Industry funding: \$29.1 million

Commercial partner: ANZCO Foods Ltd

Estimated potential economic benefits to NZ:
Approximately \$200 million increase in GDP per annum by 2025



Marbled Grass-fed Beef

The challenge

Much of New Zealand's beef is lean and destined for use in burgers and small goods. Internationally, high-quality beef is predominantly produced from cattle housed in feedlots and fed corn and other grains. Consumer demand provides an opportunity for grass-fed, free-range, high-quality beef to be positioned in niche markets.

The solution

This PGP programme is identifying the best genetics for creating high-value, premium-priced marbled grass-fed beef. It is developing an integrated value chain for high-value, marbled beef that is internationally recognised for its superior eating qualities. New Zealand beef will become prized globally as a high-quality, “centre of the plate” meat, much like the position New Zealand lamb already commands.

KEY FACTS

Programme start: August 2012

Length: 7 years

PGP funding: \$11.05 million

Industry funding: \$12.30 million

Commercial partners: Firstlight Foods Ltd,
Brownrigg Agriculture Group Ltd

Estimated potential economic benefits to NZ:
\$80 million per year by 2025



Omega Lamb

The challenge

Over the past 20 years, the sheep industry has focused on increasing lamb productivity and yield, selecting animals for lower fat levels. However, reducing fat has had unintended consequences. Lower fat affects processing, cooking and taste of red meat – much of the flavour of meat comes from fat. Lower sheep fat (condition) also affects how well ewes cope in winter and raise their lambs.

The solution

This PGP programme will reach existing and emerging markets with a new class of premium lamb products with improved health qualities – including lower levels of saturated fat, and higher levels of polyunsaturated fat and healthy omega-3 oils. It will enable industry to breed lambs that increase returns for farmers, while meeting the growing demand for premium healthy, tasty food.

KEY FACTS

Programme start: July 2015

Length: 7 years

PGP funding: \$12.5 million

Industry funding: \$12.5 million

Commercial partners: Alliance Group and
Headwaters New Zealand

Estimated potential economic benefits to NZ:
Up to \$400 million over 25 years



Red Meat Profit Partnership (RMPP)

The challenge

The red meat sector is generally dominated by price, rather than productivity. Farm profitability has been in decline for some years, caused by low uptake of innovation and adhoc collaboration. Despite the considerable research and development undertaken by the sector, opportunities for significant productivity gains are being lost. Tailored solutions that take a 'whole of business' approach and collaboration are needed.

The solution

The Red Meat Profit Partnership was formed to increase productivity and farm profits. It is driving significant collaboration among sector participants, uniting those who compete vigorously in the market, in a pre-competitive approach to raise the uptake of innovation to drive the performance and profitability of sheep and beef farming. The programme is mobilising a range of proprietary and industry-good programmes, products, tools and services to achieve its goals.

KEY FACTS

Programme start: November 2013

Length: 7 years

PGP funding: \$32.15 million

Industry funding: \$32.15 million

Commercial partners: Alliance Group, ANZ Bank, ANZCO, Beef + Lamb New Zealand, Blue Sky Meats, Greenlea Premier Meats, Progressive Meats, Rabobank, and Silver Fern Farms

Estimated potential economic benefits to NZ:

By 2025, up to \$880 million per annum in additional on-farm revenue, of which up to \$194 million per annum will be additional on-farm before tax profit



Passion2Profit

The challenge

New Zealand's venison industry very much relies on markets where demand is seasonal, and not in sync with our venison supply. On farm, there is a need to integrate new technologies and processes into farming practices to improve productivity and better respond to market demands.

The solution

This PGP programme brings together producers, processors and marketers – who together represent 95 percent of the industry. It is growing and capturing the full value available to New Zealand, by working to position New Zealand venison as a premium non-seasonal meat in new markets. Participants will also help producers deliver what consumers demand, and when they want it, by adopting new systems and technologies.

KEY FACTS

Programme start: June 2015

Length: 7 years

PGP funding: \$7.39 million

Industry funding: \$7.99 million

Commercial partners: Deer Industry New Zealand, New Zealand Deer Farmers Association, Alliance Group, Duncan New Zealand Ltd, Firstlight Foods, Mountain River Venison and Silver Fern Farms

Estimated potential economic benefits to NZ:

The programme aims to deliver economic benefits of up to \$56 million a year in additional industry revenue by 2022



Clearview Innovations

The challenge

Adding nitrogen and phosphate to pasture is a vital part of maintaining the productivity and competitiveness of New Zealand farming systems. The cost to farmers of applying these nutrients is a significant part of their annual budget and these costs are increasing. Leaching (or run-off) of nitrogen (N) and phosphorus (P) from farms has the potential to enter waterways.

The solution

This PGP programme is developing a range of products and services to improve nitrogen and phosphorous use and efficiency on farms to improve productivity and reduce losses of nutrients into waterways. It will help farmers adopt these new products and services through a best-practice extension programme, which aims to improve on-farm management and reduce environmental footprints while increasing efficiency. There will also be improvements in water quality in intensively farmed areas.

KEY FACTS

Programme start: October 2011

Length: 7 years

PGP funding: \$9.75 million

Industry funding: \$9.75 million

Commercial partner: Ballance Agri-Nutrients Ltd

Estimated potential economic benefits to NZ:
\$348 million per annum by 2025

The programme aims to deliver economic benefits of up to \$56 million a year in additional industry revenue by 2022



Seed and Nutritional Technology Development

The challenge

Future farming systems require forages that can meet the nutritional requirements of high-performing animals. They also require technologies that can mitigate the environmental impacts often associated with highly productive farming systems.

The solution

This PGP programme is developing technologies to improve pasture performance, reduce the impact of pests and diseases, overcome animal health disorders and reduce greenhouse gas emissions and losses from drought stress. Farmers can expect technologies that provide improved productivity and profitability across all New Zealand regions and farming systems where pasture renewal occurs.

KEY FACTS

Programme start: February 2013

Length: 6 years

PGP funding: \$7.15 million

Industry funding: \$7.48 million

Commercial partners: PGG Wrightson Seeds Ltd, Grasslanz Technology Ltd

Estimated potential economic benefits to NZ:
\$200 million per year by 2025



Pioneering to Precision

The challenge

Currently, fertiliser is applied to hill country farms using top dressing aircraft which broadcast the fertiliser in blanket applications over farm land, assuming the nutrient status of the land is relatively uniform. This results in over-fertilising and wastage in some areas, and under-fertilising and poor growth in others.

The solution

This PGP programme aims to improve the productivity of hill country sheep and beef farming through more efficient use of fertiliser.

It will develop technology to 'remote sense' the nutrient status of the land using aircraft-mounted sensors to determine where nutrients should be targeted. This will enable GPS-guided aircraft to deliver fertiliser to targeted areas of the farm. The technology will also enable farmers to minimise the discharge of nutrients into water ways and other critical areas.

KEY FACTS

Programme start: October 2013

Length: 7 years

PGP funding: \$5.17 million

Industry funding: \$5.17 million

Commercial partner: Ravensdown Fertiliser Co-op Ltd

Estimated potential economic benefits to NZ:
Additional export earnings of \$120 million per annum by 2030 and a net economic contribution of \$734 million to New Zealand's economy from 2020 to 2050



Transforming the Dairy Value Chain

The challenge

Dairy is New Zealand's most significant industry. Innovation throughout the dairy value chain is therefore essential to anchoring not only the position of New Zealand dairy, but the whole New Zealand economy.

The solution

This PGP programme is aimed at transforming the dairy value chain through investing in building capability and knowledge. It is enabling the creation of new dairy products, increasing on-farm productivity, reducing environmental impacts and improving agricultural education.

KEY FACTS

Programme start: April 2011

Length: 7 years

PGP funding: \$84.61 million

Industry funding: \$85.66 million

Commercial partners: Fonterra, DairyNZ Ltd, Livestock Improvement Corporation (LIC), Synlait Ltd, Zespri Ltd, Landcorp Farming Ltd, Fertiliser Association of New Zealand, Agriculture Services Ltd, New Zealand Federation of Young Farmers Clubs Inc

Estimated potential economic benefits to NZ: \$2.7 billion per year by 2020



Sheep – Horizon Three

The challenge

Global demand for sheep milk and sheep milk products is growing. Despite this growth in market demand, the New Zealand sheep milk industry is experiencing slow growth.

The solution

This PGP programme aims to build a high value and sustainable New Zealand sheep dairy industry by building a fit-for-purpose New Zealand sheep milk farming system. This system will be suited to the new imported genetics, be commercially viable, environmentally sustainable, and replicable by other New Zealand farmers.

It will also create a high performance New Zealand dairy sheep flock using imported world-leading genetics, undertake market research to determine which market segments have the greatest profit potential and how to access those markets successfully, and create high margin products to meet demand in the target markets.

KEY FACTS

Programme start: July 2016

Length: 6 years

PGP funding: \$12.56 million

Industry funding: \$18.83 million

Commercial Partner: Spring Sheep Dairy NZ Limited Partnership

Estimated potential economic benefits to NZ:

The programme's financial goal is \$200 million annual gross revenue for New Zealand's sheep dairy industry by 2030. The programme's aspirational target is annual gross revenue of \$700 million by 2030



Lighter Wines

(formerly Lifestyle Wines)

The challenge

Servicing the rapidly growing market for lower calorie and lower alcohol wines with high quality, naturally-produced options.

The solution

This PGP programme is the largest research and development effort ever undertaken by New Zealand's wine industry, designed to position New Zealand as number one in the world for high quality, lower alcohol and lower calorie wines. It will use natural and sustainable viticultural techniques and native yeasts unique to New Zealand, giving New Zealand wineries a point of difference to existing processing methods and other products on the market.

KEY FACTS

Programme start: March 2014

Length: 7 years

PGP funding: \$8.13 million

Industry funding: \$8.84 million

Commercial Partners: NZ Winegrowers and 18 contributing wineries

Estimated potential economic benefits to NZ:
\$285 million per annum by the end of 2023



Photo courtesy of Villa Maria

Whai Hua

Completed programme

Supplying ingredients for food manufacture has long been a cornerstone of the New Zealand dairy industry's business. The challenge was to develop new, added-value products, working closely with in-market partners. There was an opportunity to create niche products as well as develop Māori agribusiness capability.

This PGP programme developed immune-enhancing dairy milk products targeting health-conscious consumers in Asian and New Zealand markets. It developed dairy herds which produce milk that has high immune-enhancing properties, and undertook product development, functionality testing and market research.

Note: This programme has recently been completed. A programme evaluation is currently being undertaken.

KEY FACTS

Programme start: March 2013

Programme end: December 2016

Length: 3½ years

PGP funding paid : \$2.04 million

Industry funding paid: \$2.09 million

Total programme cost: \$4.12 million

Commercial partners: Wairarapa Moana ki
Pouakani Incorporation, Miraka Ltd, Kanematsu
New Zealand Ltd



STIMBR-Stakeholders in Methyl Bromide Reduction

Completed programme

A completed programme that explored sustainable and effective alternatives for methyl bromide, an ozone depleting fumigant for logs and other primary sector imports and exports.

Among its achievements, it implemented a nationwide monitoring protocol and methyl bromide reporting system to report annual methyl bromide use; it developed possible methyl bromide recapture/recycling technology that is a candidate for commercial development; and it developed a proof of concept for Joule Heating technology as a possible niche phytosanitary treatment for high value logs.

The programme allowed the industry to maintain good momentum in seeking alternative treatments for methyl bromide and the development of technology to reduce emissions.

KEY FACTS

Programme start: September 2011

Programme end: June 2014

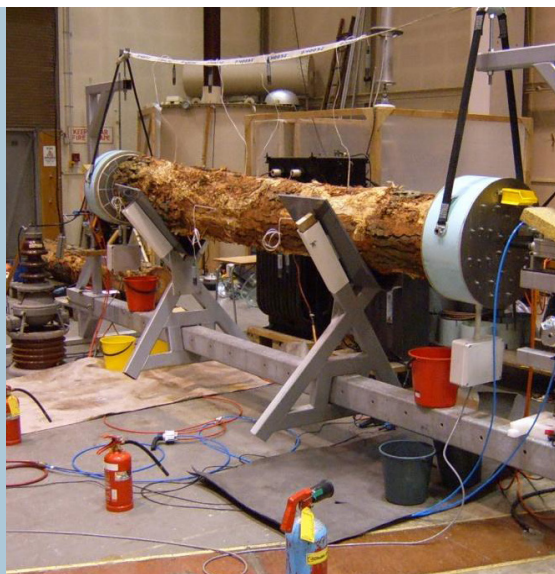
Length: 2¾ years

PGP funding paid: \$1.19 million

Industry funding: \$1.46 million

Total programme cost: \$2.65 million

Commercial partners: Stakeholders in Methyl Bromide Reduction Inc



Stump to Pump

Completed programme

A completed programme that assessed the feasibility of generating more value from forestry waste by converting it to liquid biofuels.

It concluded that a biofuels business in New Zealand from forestry waste remained sound over the longer term, however, it identified that more work by the industry partners and stronger market signals were required to further de-risk the significant capital investments required.

The industry partners undertook to confirm the commercial viability of producing biofuels from forestry waste and ensure products meet the required specifications, with a potential opportunity to progress towards plant development and, ultimately, commercialisation.

KEY FACTS

Programme start: July 2013

Programme end: September 2014

Length: 14 months

PGP funding paid: \$1.81 million

Industry funding paid: \$1.81 million

Total programme cost: \$3.62 million

Commercial partners: Norske Skog Tasman Ltd and Z Energy Ltd



Notes

