



Justine's column



Welcome to our October edition of Agri-gate. With spring now upon us, it feels like we're on the home straight to Christmas, and we're looking forward to an action-packed quarter.

Food and Fibre Innovation Conference – 30 November

On 30 November, MPI is

holding its Food and Fibre Innovation Conference, themed 'Innovation – from Vision to Action' in Wellington.

No matter their size, companies big and small are turning to innovation to grow their businesses. This unique one-day conference will focus on how a business engages in innovation across its supply chain, from using inputs, through to how products are processed, packaged, distributed and consumed. We've assembled an outstanding line-up of speakers from New Zealand and overseas.

On 30 November we'll also be holding our annual Primary Growth Partnership (PGP) Expo. Everyone who registers for the conference will be able to attend the expo and see, taste and experience, first-hand, the exciting primary industry innovations being delivered by PGP programmes.

The conference and expo will provide the opportunity to network with industry leaders and share ideas on common

challenges, and how innovation and collaboration can help to address them.

More information about the conference, including the programme and our speakers, and how to register is available on the MPI website: www.mpi.govt.nz/food-and-fibre-innovation-conference/. Earlybird registrations close on 20 October 2017.

FOOD and FIBRE INNOVATION Conference 2017

PGP programmes make finalist at Innovation Awards

Three PGP programmes are finalists in the New Zealand Innovation Awards 2017.

The Omega Lamb PGP programme is a finalist in four categories: Innovation in Agribusiness & Environment, Innovation in Food & Beverage, Innovation Excellence in Research and Export Innovator of the Year. The SPATNZ (Shellfish Production and Technology New Zealand) PGP programme is finalist in the Innovation in Agribusiness & Environment category.

Spring Sheep Milk Co. is a finalist in two categories: Innovation in Media, Marketing & Communications, and Innovation in Agribusiness & Environment. The latter relates

to Spring Sheep Milk Co.'s work in its Sheep – Horizon Three PGP programme.

I'd like to congratulate Omega Lamb, SPATNZ and Sheep – Horizon Three, and wish them success at the awards.

Sheep – Horizon Three farm open day – 1 and 2 December

On 1 and 2 December, Spring Sheep Milk Co. will be holding its second open farm day, as part of its Sheep – Horizon Three PGP programme. The programme held its first farm open day in December 2016 near Taupo, which attracted more than 100 attendees.

This time the farm open day will start at the programme's pilot farm near Cambridge which is in the early stages of development. The groups will then head to the Taupo milking site for a tour of a fully operational sheep milking farm.



Sheep milking shed at Spring Sheep Milk Co.'s farm near Taupo.

Farm open days are one of the ways that Sheep – Horizon Three is introducing new farmers to sheep milking and sharing knowledge within the industry.

The aim of the Sheep – Horizon Three PGP programme is to create a sustainable New Zealand sheep milk industry, and Dairy Exporter Magazine will be following the progress of the programme's Cambridge pilot farm.

PGP on air

RadioLive's weekend Rural Exchange programme has launched a new 16-part series called "The Future of Food & Fibre" featuring PGP programmes. The show is presented by Richard Loe, Sarah Perriam and Hamish McKay, and airs Saturdays and Sundays from 5am to 7am.

To date, they've profiled the PGP, and a number of our programmes, including New Zealand Avocados Go Global, Transforming the Dairy Value Chain, Marbled Grass-fed Beef and Passion2Profit.

You can find these stories and more on Rural Exchange's Facebook page: <https://www.facebook.com/ruralexchange>

Latest PGP programme progress reviews

Each PGP programme is required to have at least one progress review, typically at its midpoint, to provide an independent perspective on the progress of the programme along with recommendations to help it to meet its outcomes. Earlier this year we commissioned independent progress reviews of the High Performance Mānuka Plantations and Lighter Wines PGP programmes. Summary reports of the findings of both progress reviews are available on the PGP programme pages on the MPI website.

High Performance Mānuka Plantations

The High Performance Mānuka Plantations programme is tapping into the lucrative mānuka honey industry, focusing on the establishment of high performance mānuka plantations to produce mānuka honey for medical use. It's equipping the industry with a much better understanding of how and where to successfully establish mānuka plantations to

produce medical grade honey, and make high performing mānuka seedlings available for purchase by interested parties.

The independent progress review concluded that the programme has delivered a number of achievements such as completing research into the factors that affect nectar yield and quality, establishing and monitoring 400 hectares of trial plantations across 14 sites, and launching Mānuka Farming New Zealand to provide expert advice and high performing mānuka seedlings to landowners interested in planting mānuka for honey. The progress review also concluded that the programme has provided a foundation of good information on establishing plantations and produced nectar with significantly higher levels of anti-bacterial activity potential than wild local mānuka.

The review has provided recommendations to help ensure the programme delivers on its outcomes. In many cases the recommendations support the programme's current priorities and direction of travel. These include continuing to prioritise work on compiling apiary and honey data; completing the programme's predictive model; developing technical notes and a business case for mānuka plantations, and a plan for further research and resources; and holding a mānuka plantations/apiculture field day.

While the programme is delivering a number of benefits for the mānuka honey industry, the programme partners appreciate that delivering on its vision of a \$1.2 billion New Zealand mānuka honey industry by 2028 will take longer. A key reason is that the programme has determined there are likely to be less sites and land suitable for plantation mānuka for medical grade honey production than originally thought. In addition several factors outside of the programme's control such as adverse weather, alternative nectar sources and other apicultural difficulties is affecting its ability to fully prove the benefits of planting high performance mānuka plantations within the timeframe of the programme. As a result, the programme will be re-estimating its expected long term benefits.

Growing plantation mānuka in New Zealand for honey production is a recent development. As you'd expect with any developing industry, it takes time and on-going research, learning and optimisation to generate proven results. The High Performance Mānuka Plantations PGP programme is contributing to this journey of research and discovery, and the programme partners are committed towards ensuring this programme is a success.



Close up of a mānuka cultivar

Lighter Wines

The Lighter Wines PGP programme is enabling the production of naturally produced, high quality, lower alcohol and lower calorie 'lighter' wines, and is supporting market development to establish a \$285 million per annum category by 2024.

It aims to establish New Zealand as the top producer of lighter wines internationally.

The programme has delivered a number of outputs that have enabled the winery companies directly involved with the programme, as well as those in the wider industry, to produce lighter wines of an improving quality and to promote them in a way that aligns with consumer preferences. The domestic lighter wine category has grown from around \$10 million when the programme started to over \$33 million, and the export market is beginning to develop.

Some of the research undertaken, particularly in the area of sensory perception, is novel and has developed science capability in the industry. A few of the research outputs have also had wider application for the production of other wine types.

The independent progress review found that the programme has made “very good” progress across its five major projects, that it is well planned, has an effective governance and advisory structure and that it has some useful spillover benefits such as capability building.

It also concluded that the programme was likely to achieve its original objectives and the associated benefits, including hitting its target of \$285 million in sales by 2024, which is good for both the industry and the New Zealand economy.

A number of recommendations were made by the reviewers. These included increasing industry representation on the Lighter Wines Programme Steering Group, and ensuring the programme completes and implements its transition to a dashboard style of reporting as soon as possible, to focus on outputs, outcomes, risks and challenges.

The recommendations are considered to mainly be refinements or extensions of the programme’s current work, and aren’t considered to be material to the success of the programme or put its achievement of benefits at risk.

Healthy interest in Sustainable Farming Fund 2018/19 funding round

The 2018/19 funding round for our Sustainable Farming Fund (SFF) closed on 14 September 2017, for projects starting 1 July 2018. We received 86 eligible applications for projects.

The SFF provides support for applied research projects driven and led by farmers, growers and foresters that focus on delivering economic, social and environmental benefits to New Zealand’s primary industries.

We’re now undertaking technical or expert assessments of applications before the fund’s independent panel reviews

these in late November and makes recommendations to MPI on the successful applicants.

For more information about the SFF, please see the MPI website: www.mpi.govt.nz/funding-and-programmes/farming/sustainable-farming-fund

Also in this edition of Agri-gate

- We shine the spotlight on the Marbled Grass-fed Beef PGP programme
- We profile an SFF project investigating biocontrol agents to control the invasive Nassella tussock in the South Island.

I hope you enjoy this edition of Agri-gate.

Justine Gilliland
Director Investment Programmes, MPI.

From the Chair, PGP Investment Advisory Panel



Welcome to this edition of Agri-gate. We’ve now entered the fourth quarter of 2017, when things generally tend to ramp up, rather than slow down. This is true across the PGP programmes portfolio, but for this column, I’d like to focus on the Red Meat Profit Partnership (RMPP).

RMPP brings together nine partners – most of the major meat processors, plus Beef+Lamb NZ, ANZ and Rabobank – in a collaborative industry good programme aimed at lifting farm productivity and profitability.

Back in 2009, the Red Meat Sector Strategy estimated that up to \$880 million each year in additional farm revenue is possible by 2025. We’ve got no doubt that this is an ambitious longer term target, but the RMPP programme is already making good headway and delivering initiatives that give our red meat sector the best possible opportunity for success now and long after the programme ends.

The red meat sector has struggled with declining sheep numbers and often weak profitability for a number of years. However there is a percentage of farmers who consistently make very good profits by focusing on the things they can control on their own farms to maximise their own productivity and profitability.

An important aspect of the RMPP has been to identify the key things the top performing farmers do. Their research shows that the top performers aren’t radically different but that they are good at planning and using performance measurement data to quickly fine tune their operations. Their success is based on the cumulative outcome of doing a lot of routine things very well at the right time.

It is worth noting how RMPP has worked to actively engage a lot more women in their farming businesses. The 'Understanding your Farming Business' courses, funded by RMPP and run by the Agri Womens Development Trust, have helped 800 women so far to build their business knowledge, skills and confidence to contribute more actively in their farm business planning and operations.

The other important factor is the research into extension methods undertaken by RMPP. This research has helped guide better ways to get farmers to adopt best practices. A lot of farmers learn best from fellow farmers but need support from trusted experts to turn their ideas into action.

RMPP has found that grouping together eight or so farm businesses that share common challenges and goals, and then supporting them with a trained facilitator, and seeding money to meet the cost of expert advice, has worked. This approach has lifted the confidence of these farmers to invest time and money into making productivity changes and the early results are very encouraging.

The key determinant of RMPP's success will be getting a large number of red meat farmers – they are targeting 3 000 – to participate in this new approach to achieving adoption of best practices. RMPP has created the RMPP Action Network to roll this out across New Zealand. The rollout is just starting and the PGP Investment Advisory Panel will be following progress with great interest.

DataLinker, developed by RMPP in conjunction with the Transforming the Dairy Value Chain PGP programme, makes it easier for farmers to utilise and aggregate data from multiple sources for farm management and industry performance benchmarking purposes. Success for DataLinker depends on sufficient data providers (for example, meat processors and fertiliser companies) investing in system modifications to allow users to get the data they want. So far the rate of uptake has been slow, but the programme is looking to ramp this up.

Encouraging more farmers to gather and use performance data is the reason RMPP is also running courses focussed on computing skills.

Other RMPP initiatives include the development of an electronic version of the Animal Status Declaration form (eASD). It is mandatory for farmers to supply this information for biosecurity purposes when animals are shifted and the electronic version is fast and efficient. The eASD will be available to the whole of New Zealand's farming community, not just the red meat sector.

RMPP has developed the NZ Farm Assurance Programme (NZFAP) that will streamline the farm audit process and eventually ensure all farmers are working to the same baseline standards in areas such as animal welfare. Twelve companies are due to start using the NZFAP by the end of the year.

NZFAP will support the 'NZ Red Meat Story' being created by Beef + Lamb NZ, by validating the claims that underpin the key international market place messaging about the sector's high standards for raising animals and producing high quality meat in a natural environment.

A key challenge facing the red meat sector is encouraging more young people to take up careers in the industry. Around 105 secondary schools across New Zealand have taken up resources developed by RMPP, and they've incorporated these into mainstream subjects like English, Science and Maths. RMPP's target for this year was 75 schools. Feedback from teachers and students on these resources is overwhelmingly positive. This work is being supported by initiatives in primary schools as well as at tertiary level.

RMPP's online Knowledge Hub, which is now operational, also supports farmer adoption of new knowledge and technology. Housed on the Beef + Lamb NZ website, the Knowledge Hub has brought together a range of resources provided by Beef + Lamb NZ and new modules developed

by RMPP into one place. This material from industry experts helps farmers get the information they need to confidently make more informed decisions. It includes short 'how to' videos, fact sheets and presentations by experts.

RMPP provides examples of the benefits of collaboration between PGP programmes. While PGP programmes cover a wide range of different areas, there are definitely lessons that are transferable and MPI and programmes are making sure they're captured. This kind of collaboration simply wouldn't have been possible without the PGP.

All of this work I've outlined has been achieved in the first half of the RMPP PGP programme and we are expecting the second half will continue this good momentum. This is encouraging for the future of the New Zealand red meat sector.

John Parker
Chairman, PGP Investment Advisory Panel

PGP Programme Spotlight September 2017 – Marbled Grass-Fed Beef

The opportunity

New Zealand has an exciting opportunity to produce and supply the best grass-fed beef in the world through the Marbled Grass-Fed Beef Primary Growth Partnership (PGP) programme. This 7-year, \$23 million PGP Programme started in August 2012 and is led by partners First Light Foods and Brownrigg Agriculture. The programme uses Wagyu genetics to produce highly marbled grass-fed beef with superior eating qualities.

In key export markets, premium beef is still mostly produced from grain-fed cattle grown on feedlots, however consumer demand continues to show strong preferences for grass-fed, free-range, premium beef, fuelling growth within the global grass-fed meat category.

Wagyu beef, which originated in Japan, is well known internationally for its highly marbled quality and, coupled with New Zealand's natural growing environment, the programme aims to position marbled grass-fed beef globally as a prized, high-quality, "centre of the plate" meat.

"Farmers gain certainty of income with fixed price contracts on the back of a growing demand from finishers and international markets. This presents a great opportunity for farmers to diversify their earnings," says First Light's CEO Gerard Hickey.

Using the best genetics

Critical to the programme is the supply of Wagyu genetics. Wagyu Breeders Ltd (WBL) is the New Zealand Wagyu breeding stud owned by programme partner Brownrigg Agriculture. WBL uses a range of full blood Wagyu genetics originally imported from Japan and supplies the genetics for the First Light Grass-fed Wagyu programme, enabling First Light to currently operate as the largest commercial producer of grass-fed Wagyu cross animals in the world.

As well as Wagyu crossed with traditional beef cows (predominantly Angus), mating dairy breeds with Wagyu sires has provided a growing source of high-marbling beef. Supporting the programme's recent focus on dairy integration, an exclusive supply agreement with New Zealand's leading dairy herd improvement company, LIC, has been instrumental in growing a secure stable supply of Wagyu x dairy calves.

Dr Paul Muir from On-Farm Research continues to lead the research and ongoing improvement activities within the programme. Valuable data has recently been analysed from completed progeny trials. This trial data will be used to further enhance performance of feed and farming systems and provide a basis for future genetics planning and improvement.



Wagyu breeding sires from the Wagyu Breeders Ltd stud farm.

Engaging committed farmers

Developing an integrated supply chain from 'farm to plate' is the cornerstone of the Marbled Grass-fed Beef PGP

programme. More than 300 farmers are now involved in the First Light Wagyu programme, including dairy farmers, calf rearers, growers and finishers. Farmer numbers have increased significantly in the South Island where processing has recently started to support this growth and maximise logistics efficiencies.

Continuing to build the producer group model, where regional hubs of farmers co-operate in the rearing, finishing and supply of animals, remains an important factor to the overall success of the programme.

The programme has also provided a solution for utilising calves from the dairy industry. Many dairy farmers have already proven success in using First Light Wagyu to provide a sustainable and economic alternative to bobby calves, and are proud to be part of a programme promoting animal welfare within the industry.

Russell and Charlotte Heald milk 430 cows in a family operation in Norsewood. They are now into their second year of rearing Wagyu-cross calves, taking them through to finishing.

"We use Wagyu semen to A.I. our mixed age cows to better utilise our calves. The impact has been huge. We're half way through calving and have only sent three bobby calves away. It makes good sense to utilise what is being produced and diversify at the same time and add to the cash flow.

"Within two years, a third of our income will come from Wagyu beef," says Mr Heald.

Bringing the product to market

At the marketing end of the supply chain are a dedicated team ensuring First Light's grass-fed Wagyu beef is consistently meeting consumer demand. In November 2016, First Light launched its retail range into New Zealand

supermarkets and demand continues to be strong in the local market. The United States remains the company's largest market with new products recently launched including burger patties and hotdogs. The UK and Europe also continue to be significant customers for First Light grass-fed Wagyu.

First Light's General Manager Sales and Marketing, Jason Ross, says "If the first five years were all about creating a truly differentiated product and supply chain in New Zealand, the next five are all about building a distinct and defensible position in the global market. We have

learnt and embedded the key disciplines to be a globally competitive FMCG business, now we have to execute well and bring the value home to New Zealand farmers and stakeholders."

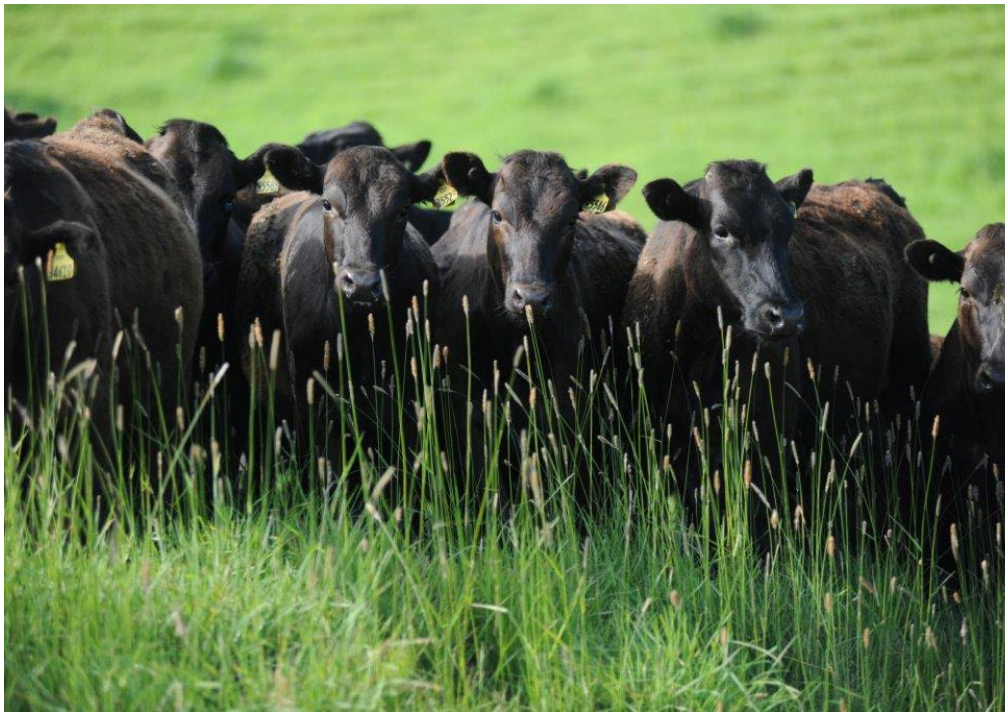
Challenges for the future

Significant growth is forecast and systemising and communicating the learnings in the supply chain is a key focus as the PGP programme moves into its final two years. This year First Light are marketing approximately 5 600 cattle, while concurrently planning matings to meet

processing targets of 20 000 cattle in three years' time. It also remains important to ensure there is a long term sustainable offering from First Light Wagyu to attract farmers.

Further growing the presence of grass-fed Wagyu in targeted global markets will help build on the programme's success to date, and consolidating supply chain integration will ensure the industry partners are well equipped to maintain momentum beyond 2019 when their PGP programme ends.

Learn more about First Light at www.firstlight.farm



A herd of grass-fed Wagyu cattle.



First Light Foods' retail range of grass-fed Wagyu beef products.

Sustainable Farming Fund supports Biocontrol for Nassella tussock

The Sustainable Farming Fund (SFF) has helped AgResearch and other key stakeholders to investigate potential biocontrol agents for the invasive *Nassella tussock*.

Nassella tussock infests over 524 000 ha of pastoral land in the South Island and is known to occur in Auckland, Hawke's Bay and Northland. Current management is costly at about \$2 per removed plant. It also requires ongoing maintenance to keep populations at their current low level, and prevent economic loss, which is estimated at \$417 million (present value) in Canterbury alone.

"Biocontrol could potentially provide a more cost-effective and sustainable solution," says MPI Senior Investment Advisor Janine Alfeld.

"Previous work has identified three fungal pathogens – a smut, a rust and a mushroom-like fungus – on *Nassella tussock* in Argentina."

The smut attacks leaves, the rust attacks flower heads and mushroom-like fungus, also called a Corticiaceous fungus, attacks roots and the base of plants.

"This SFF-funded project studied the feasibility of resuming this work in New Zealand. It investigated the potential of the three fungi in particular, and pathogens in general, as biocontrol agents for *Nassella tussock*," says Janine.

"Results of this study will be discussed with stakeholders and if a biocontrol programme is to go ahead, further funding opportunities will be sought."



A herbarium specimen infected with smut (photo courtesy of Freda Anderson).



Nassella tussock (photo courtesy of Graeme Bourdôt, AgResearch).