

# Inside Dairy

July 2018

Your levy in action

## FORAGE PROJECT SUCCESS

Turning good science into practical solutions



### Young faces at DairyNZ

Linking Masters students  
with master scientists

### Changing the conversation

Women on-farm: three  
decades of discussion

DairyNZ 



## over the fence...

Firstly, thank you to those of you who contacted me or one of the team at DairyNZ over the last month with questions and views on *Mycoplasma bovis* and the decision to eradicate.

We did not make this joint decision with the government and beef sector lightly. You, our farmers, were at the heart of our call to take this one chance to eradicate the disease from New Zealand.

The current number of 'active' Infected Properties (quarantined under movement restrictions) as at 20 June is 38. We know those farmers have experienced huge pain and hardship. DairyNZ is here to support you. This joint decision to eradicate was made to keep the disease off the 12,000 other farms. On page 14 of this *Inside Dairy*, you'll read a letter from DairyNZ chair Jim van der Poel, who explains our thinking and how we'll support you now and in the coming years.

This *Inside Dairy* focuses on some of our research work – funded by your levy – and we share some inspirational stories about how that research is being applied on farms.

In our lead story this month, we learn how the team at Ngāi Tahu's Paritea Farm is applying scientifically-proven practices to support its ex-forestry soil and reduce nitrate leaching. This story includes a Māori whakatauki (proverb): 'Toitū te Marae o Tāne, Toitū te Marae o Tangaroa, Toitū te Iwi' (*when land and water are sustained, the people will prosper*). This really resonated with me and it sums up why DairyNZ is so driven to continue with world-leading research. DairyNZ invests about \$18.5 million of your levy on research every year – all of it to achieve more profitable and sustainable farming practices that will help you on your farm in the future.

Also in this issue, you'll read about our work to breed low-nitrogen livestock, reduce methane emissions and nitrate leaching, deal with lameness, and more. I hope you enjoy the magazine as much as I did.

As always, I welcome your feedback – email me at

[tim.mackle@ceo.dairynz.co.nz](mailto:tim.mackle@ceo.dairynz.co.nz)

**Tim Mackle**  
Chief executive  
DairyNZ



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*Inside Dairy is the official magazine of DairyNZ Ltd. It is sent to all New Zealand dairy farmers, and selected government agencies, dairy sector organisations and rural professionals.*

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On the cover: Checking the progress of their plantain are (left to right) Ngāi Tahu Farming's general manager of dairying Shane Kelly, Paritea Farm manager Sam Lovelock and staff member James Keeling.

## TAKE 5... TIPS FOR FARMERS

### 1. Staying well during tough times



The health and wellbeing of all farmers, their families and their employees is extremely important to us here at DairyNZ. Use our 'eight tips to maintaining wellness' to keep burnout at bay and our 'ten signs of illness and burnout' to look out for one another –

[dairynz.co.nz/wellbeing](http://dairynz.co.nz/wellbeing)

### 2. Grazing game plan

Grazing management in the first two months after calving largely determines your herd's production to Christmas. Try using DairyNZ's Spring Rotation Planner (SRP) to manage pasture allocation with your staff this spring. The tool takes the guesswork out of grazing management. Visit [dairynz.co.nz/srp](http://dairynz.co.nz/srp) and read our article on page 21.

### 3. Shared budgets online



Top-performing farms from North West Waikato, West Waikato, South Waikato, Lower North Island and North Canterbury are now sharing their budgets online, alongside our existing case study farmers who are adding their 2018/19 forecast budgets too. Great for identifying opportunities on your own farm! Visit [dairynz.co.nz/budget-case-studies](http://dairynz.co.nz/budget-case-studies)

### 4. Roster time off

It's important to organise time off, especially during the busy period. A roster will highlight where cover might be needed. Use a simple online system like DairyNZ's Roster Builder to create rosters quickly – [dairynz.co.nz/rosterbuilder](http://dairynz.co.nz/rosterbuilder)

### 5. Calf care tips



Calving's just around the corner so now's the time to replace any lost tags and update your farm records and record queries. Check out the tools available to help you record calvings anytime, anywhere. Also, record issues in your herd management software and report any calf defects/abnormalities to your AB company. Learn more at [dairynz.co.nz/calves](http://dairynz.co.nz/calves)

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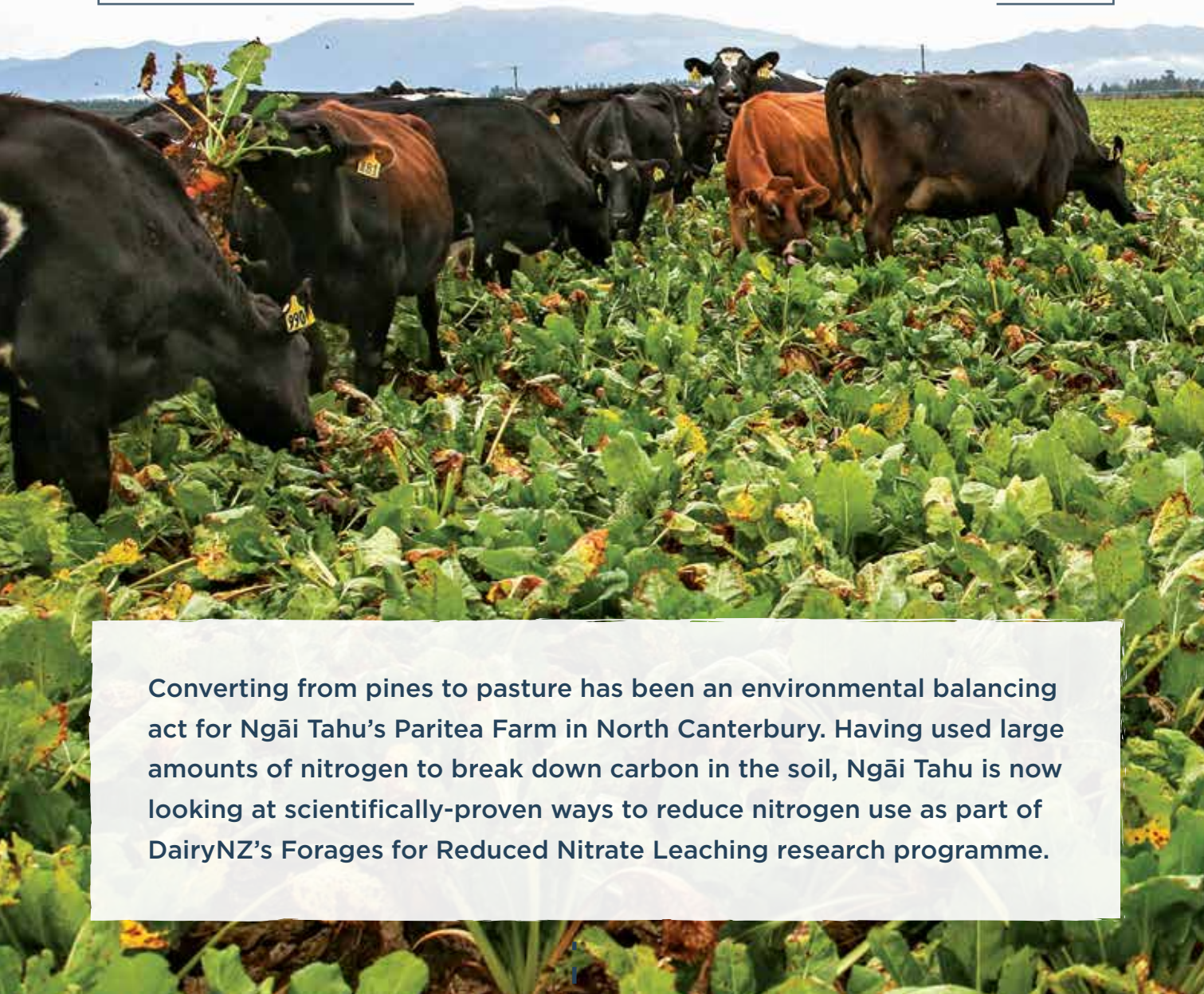
#### We appreciate your feedback

Email [insidedairy@dairynz.co.nz](mailto:insidedairy@dairynz.co.nz) or call us on 0800 4 DairyNZ (0800 4 324 7969). Alternatively, post to: Inside Dairy, Private Bag 3221, Hamilton 3240. For information on DairyNZ visit [dairynz.co.nz](http://dairynz.co.nz).



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# GRASSROOTS SCIENCE HOLDS KEY TO SUSTAINABLE FARMING



Converting from pines to pasture has been an environmental balancing act for Ngāi Tahu's Paritea Farm in North Canterbury. Having used large amounts of nitrogen to break down carbon in the soil, Ngāi Tahu is now looking at scientifically-proven ways to reduce nitrogen use as part of DairyNZ's Forages for Reduced Nitrate Leaching research programme.

*Paritea farm manager Sam Lovelock, Ngāi Tahu Farming's general manager of dairying Shane Kelly and staff member James Keeling: using fodder beet to transition into winter, followed by oats to capture nitrogen left in the soil.*



## FARM FACTS

### NGĀI TAHU FARMING'S PARITEA FARM

**LOCATION:** Eyrewell, North Canterbury

**FARM SIZE:** 358ha (effective) irrigated

**HERD SIZE:** 1050 predominantly Kiwi-cross

**PRODUCTION:** 472,500kg MS



*FRNL research has shown that, when managed properly, fodder beet can lower animals' N intakes and urinary N excretion without negatively affecting their health and productivity.*

When Shane Kelly joined Ngāi Tahu Farming as rural project manager in 2013, his job was to oversee the conversion of 3900ha of forestry land to irrigated pasture. Keen to apply the latest science-backed farming practices, he and the iwi quickly put their hands up to take part in the Forages for Reduced Nitrate Leaching (FRNL) research programme.

FRNL is a six-year DairyNZ-led programme looking at how to target different aspects of the nitrogen (N) cycle to reduce nitrate leaching. These include reducing the N content of animals' diets, altering urinary N excretion, and increasing N uptake by pasture or crops.

"Becoming part of the FRNL research project in 2014 was an opportunity for Ngāi Tahu to implement best practice and integrate the research findings into its dairying business," says

Shane, who is now Ngāi Tahu Farming's general manager of dairying.

"Because Paritea Farm is on ex-forestry soils, it historically used significant amounts of nitrogen to assist with carbon breakdown, so in this context, it's very important for us to explore good research."

Paritea Farm is part of the Ngāi Tahu Te Whenua Hou farming development north of Christchurch and is one of nine monitor farms in Canterbury contributing to the FRNL research project.

The monitor farm network includes a mix of dairy, arable, sheep and beef, and mixed arable/dairy properties. Farmers and scientists work together to put theory into practice and monitor the results.

So far the FRNL research has identified three promising options

– the use of plantain, fodder beet and a catch crop – that significantly reduce nitrate leaching. Shane says all three techniques are being applied at Paritea with encouraging results:

- Nitrogen leaching has decreased by 31 percent between 2014/15 and 2016/17.
- The simple N surplus has decreased by 38 percent between 2014/15 and 2016/17.
- Farm working expenses have reduced from \$4.71/kg MS to \$3.97/kg MS between 2014/15 and 2015/16.

See table on page seven for details.

### Custodians of the land

Ngāi Tahu Farming was also involved in the DairyNZ's Pastoral 21 (P21) project to help understand the impacts of regional regulations limiting nutrient loss on-farm. Some of the principles of this research have been applied at Paritea, including lowering the stocking rate in the 2015/16 season to create efficiencies and reduce the N leaching number.

"Projects like P21 and FRNL are a good fit for us and highlight what we can do to improve our environmental footprint," says Shane.

"This programme provides us as custodians of the land with scientific research that will help us raise the bar and showcase the investments we're making.

"It's all about giving confidence to the iwi and showing that we're doing everything we can to be leaders in this area. We also have a strong emphasis on sharing our knowledge with the farming community for the overall benefit of the sector. We're not in competition with our neighbours – it's all about kaitiakitanga (stewardship) and long-term sustainability," says Shane.

DairyNZ senior scientist Ina Pinxterhuis, who's leading the FRNL programme, says the aim of having farmers involved in this research programme is to get feedback on proposed mitigation options and on results from the various experiments.

**“Because Paritea Farm is on ex-forestry soils ... it's very important for us to explore good research.”**

"The farmers certainly delivered on this. We've had great workshops with robust discussions – for example, around practicality or consequences researchers hadn't thought about. This changed the research direction in several cases," says Ina.

"The farmers also demonstrate what they are doing

## What changes have they made?

Since being involved in the FRNL project, the team at Paritea Farm has:

- introduced fodder beet onto the milking platform, followed by an oats catch crop
- included plantain in the re-grassing regime, and established it in existing pastures
- lowered imported supplements
- lowered N fertiliser application
- lowered the stocking rate by 0.5 cows/ha.



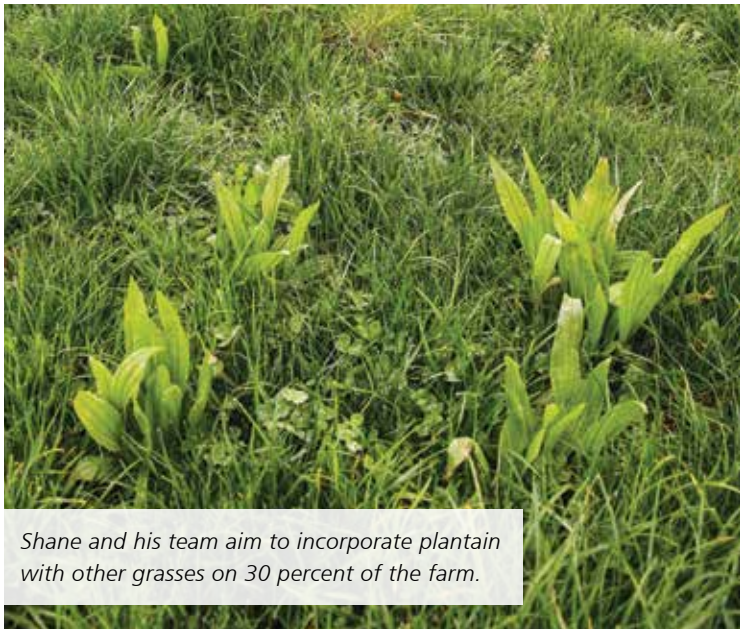
**We're not in competition with our neighbours – it's all about kaitiakitanga (stewardship) and long-term sustainability.**

Shane Kelly





Staff meeting: (left to right) Shane, James, Gurjot Singh and Sam discuss fodder beet transitioning.



Shane and his team aim to incorporate plantain with other grasses on 30 percent of the farm.



Checking the milking herd: (left to right) Sam, Shane and staff member Nigel Field.

to reduce environmental impact and how they go about implementing the new options. The detailed data they collect is invaluable to evaluate the impact at the scale of commercial farms. I think we have achieved a unique collaboration between farmers and researchers."

Shane says not everything they try works, but one of the best things about being a monitor farm is the support from DairyNZ to make changes.

"We're looking at ways to oversow plantain to fit into the existing sward and while we've had some problems with drilling, nutting out the best way to do it has been relatively easy."

### Farm system change

The big changes for Paritea have been incorporating plantain within the ryegrass mix and introducing fodder beet and catch crops.

"Our aim is to incorporate plantain with other grasses on 30 percent of the farm to form an intensive grazing system using fodder beet and catch crops," says Shane. "Fodder beet is used for transitioning into winter, and oats are planted in June to capture N in the soil left after grazing the fodder beet.

"Oats soak up some of the 200 to 250 units of N that would be sitting there at risk of leaching if the land was fallow. So, using oats is beneficial when it comes to retaining N in the system, which can be used to replace other imported supplement or nitrogen fertiliser at other times in the year. This is probably a break-even proposition in financial terms, but a positive outcome for the environment," says Shane.

"I believe we need to think in 10-year cycles when it comes to system change. The exciting thing is that in another 10 years scientists will have come up with other solutions and we'll be embracing different techniques."

Shane says there aren't too many implications in managing the new system apart from getting your eye in when using plantain. Paddocks can look patchy and look worse when the plantain goes to seed, he says.

"Visually, plantain looks different from ryegrass/clover cover for what's on offer and it also looks different with plantain plants scattered across the paddock, especially when it's flowering, so you have to bear this in mind when cows are harvesting, and recalibrate your eye. Pasture doesn't look so lush, which doesn't necessarily mean it's producing less, so farmers have to adjust their expectations of what 'good' looks like."

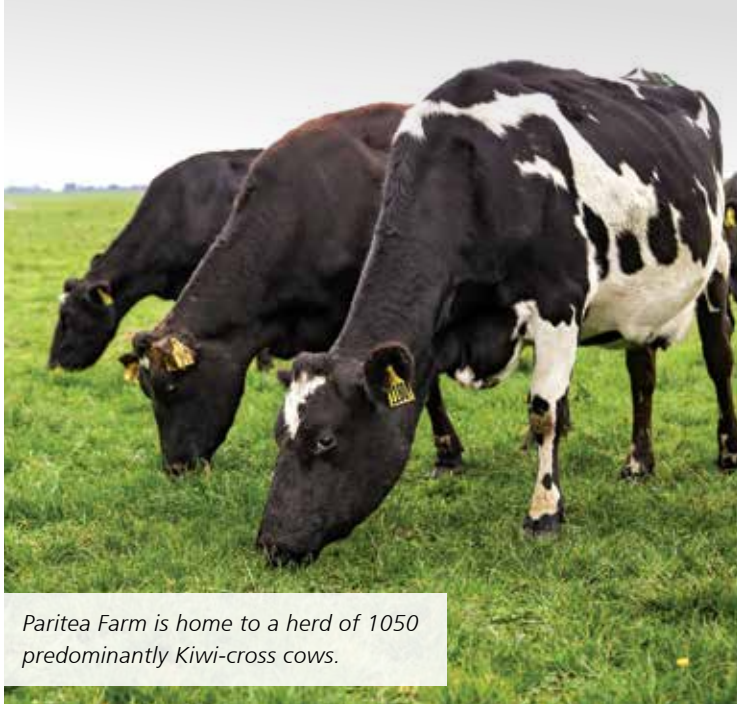
### Lifting our game – together

Shane says farmers sometimes complain about the levy, but he believes New Zealand dairy farmers are extremely lucky to have an organisation like DairyNZ that carries out research projects such as FRNL.

"As a farmer I believe we need to celebrate our work, but that we also need to strive to be sustainable and strong, both socially and environmentally. We may agree to disagree on some things, but if we can all work together as a community, we will come up with solutions together," he says.

"DairyNZ is an advocate for farmers at a higher level and





Paritea Farm is home to a herd of 1050 predominantly Kiwi-cross cows.

we're well supported when things go wrong. No other country in the world has the resources available like the toolkits and the comprehensive information available on the DairyNZ website. New Zealand dairy farmers are fortunate to have this model in place.

"From good science comes practical solutions and tools to help us operate more efficiently. As a result, a more sustainable farming model will be developed. The FRNL focus on leaching gives the sector an opportunity to showcase innovation and to have a positive impact on the image of farming, but more importantly a positive outcome on water quality within the catchment and, as a result, benefits for the entire community."

■ Words: Christine Hartley ■ Photos: Tony Benny

### In all its work Ngāi Tahu considers the whakatauki (proverb):

Toitū te Marae o Tāne,  
Toitū te Marae o Tangaroa,  
Toitū te Iwi

*When land and water are sustained,  
the people will prosper.*

## What is FRNL?

Forages for Reduced Nitrate Leaching is a DairyNZ-led collaborative research programme across the primary sector, delivering science for better farming and environmental outcomes. It runs until 2019 and the aim is to reduce nitrate leaching through research into diverse pasture species and crops for dairy, arable and sheep and beef farms. The main funder is the Ministry of Business, Innovation and Employment, with co-funding from research partners DairyNZ, AgResearch, Plant & Food Research, Lincoln University, Foundation for Arable Research and Landcare Research. DairyNZ invests \$450,000 of levy funds each year. To learn more about the research, monitor farms and results, visit [dairynz.co.nz/frnl](http://dairynz.co.nz/frnl)



## Paritea Farm's key numbers

DairyBase	14/15	15/16 <sup>#</sup>	16/17 <sup>@</sup>
Production (kg MS/ha)	1660	1397	1405
Pasture eaten (kg DM/ha)	14.2	14.9	13.2
Imported supplement (kg DM/cow)	863	234	599
Farm Working Expenses (\$/kg MS)	\$4.71	\$3.97	\$4.66 (provisional)
<b>Overseer</b>			
Fertiliser N (kg N/ha)	344	227	237
Supplement N (kg N/ha)	60	17	41
Exported feed N (kg N/ha)	0	8	8
Product N (kg N/ha)	102	85	84
N leaching <sup>+</sup> (kg N/ha)	88	56	61
Simple N surplus* (kg N/ha)	302	151	186
N surplus (kg MS/kg)	5.5	9.9	7.6

<sup>#</sup> adopted FRNL mitigations of fodder beet (low-N supplement) on the milking platform. This paddock was re-sown in permanent pasture including plantain. Stocking rate was also decreased from 3.6 to 3.1 cows/ha to align with the decrease in imported supplement and N fertiliser.

<sup>@</sup>Additional low-N feed used (maize silage). Autumn fodder beet followed by a catch crop of oats. Plantain continued to be established through pasture renewal as well as by undersowing 60ha.

<sup>+</sup> Overseer version 6.3.0. The benefit of plantain is not fully reflected in Overseer.

<sup>\*</sup> Fertiliser N + Supplement N – Exported Feed N – Product N

# Low-N cow research underway

DairyNZ is leading a seven-year research project that aims to breed cattle with less nitrogen in their urine. This research could reduce sector-wide nitrate leaching by 20 percent, as DairyNZ geneticist Mark Camara explains.



One of the key commitments of the *Dairy Tomorrow* strategy is to ‘protect and nurture the environment for future generations’.

Right now, a team of researchers is making good on that commitment by investigating the role of genetics in reducing nitrogen (N) in cows’ urine. If we can breed dairy cows that excrete less N in their urine, we can reduce the amount of N reaching our waterways. That’s good for farming and good for our environment.

The research involves thousands of cows on farms around New Zealand. Scientists are developing breeding strategies and estimating the expected reduction in N leaching – potentially up to 20 percent.

Previous research has shown that, in dairy cows fed N-rich diets, milk urea levels and urinary N rise together. But this environmental correlation doesn’t necessarily mean that cows with genetically-low milk urea that are fed the same diet as typical cows will have low urinary N. And if this ‘genetic correlation’ doesn’t hold up, selecting for low milk urea won’t reduce urinary N. In addition, we don’t know if reducing urinary N would compromise other breeding worth (BW) traits through other, unfavourable, genetic correlations or improve them through favourable ones.

Verifying these genetic relationships isn’t easy. It takes many measurements of urinary N, milk urea and other BW traits on related cows to separate the environmental and genetic contributions to these relationships.

To take these measurements, a high-tech gadget developed by AgResearch is attached to free-ranging cows. It channels



AgResearch urine sensor in action.  
Photo: Brendon Welten, AgResearch

their urine past a sensor and records the time, volume, and nitrogen concentration of every urination. Pairing direct urinary nitrogen data with indirect measurements such as milk urea and applying complex statistical models can then estimate the genetic correlation between milk urea and urinary nitrogen. If it’s high enough, we can use milk urea as a predictor trait. If it’s not, we’ll have to find another way.

For farmers to get credit from regulatory bodies for reducing urinary urea through breeding, we’ll need to quantify the environmental impacts. Therefore, this programme will also upgrade the Overseer model used by regional councils to monitor environmental compliance. This upgrade will be based on data from studies that monitor nitrogen leaching from farm-scale trials to determine how low-N genetics interacts with alternative pasture plants and crops that also impact urinary nitrogen levels.

## Key points



**This programme will help farmers meet environmental targets in three key ways:**

1. Developing genetically-low nitrogen-excreting animals.
2. Offering breeding and management strategies to reduce nitrogen leaching.
3. Reducing sector-wide nitrate leaching by 20%.

## How’s it funded?

- DairyNZ is leading the seven-year, \$21 million research partnership.
- The government has granted \$8.4 million to the project through the Ministry of Business, Innovation and Employment; \$11.5m will come from farmers’ levy payments to DairyNZ; and the balance will come from CRV Ambreed and Fonterra.
- Participating scientists will come from DairyNZ, Abacus Bio, A. L. Rae Centre for Genetics and Animal Breeding, AgResearch and Lincoln University.

# Cultivar performance under the FVI spotlight



DairyNZ's Forage Value Index (FVI) helps farmers choose the best-performing grasses for their region using its simple five-star rating system. Trials have now started to test the FVI systems under realistic dairy farm management conditions, as DairyNZ senior scientist Cáthal Wims explains.



The DairyNZ FVI is an independent, region-specific, profit-based index for short-term and perennial ryegrass cultivars, which allows farmers to select cultivars based on the expected economic value to their business. It categorises cultivars into five 'star rating' groups in each dairy region – those with a higher star rating are expected to deliver greater economic value for dairy farmers.

The FVI is supported by a comprehensive levy-funded programme of research and was launched in 2012. It's now entering a validation phase, testing the FVI systems under realistic farm management conditions. This will give us increased confidence that the FVI's methodology is robust and that the FVI can be trusted. Currently, the FVI includes seasonal dry matter (DM) yield only, but we plan to include metabolisable energy and persistence in the index.

## Testing the FVI systems

These trials are taking place on DairyNZ's Scott Farm, just outside Hamilton, and are managed by DairyNZ's science, technical and farm teams. Forty hectares (ha) of pasture was re-grassed over the past three autumns, with equal areas sown to high- and low-ranked FVI cultivars. The high-ranked FVI cultivars were selected from the five-star rating band in the FVI for the Upper North Island, while the low-ranked FVI cultivars were selected from the one- and two-star rating bands. All cultivars were sown with white clover (standard farm practice).

These pastures were used to create two farm systems treatments: one based on low-ranked FVI cultivars and another based on high-ranked FVI cultivars. They'll be compared in a three-year farm system experiment that started last month.

The aim is to determine whether DM yield differences of the cultivars emerge as expected and translate into profit rankings matching their relative FVI positions. We'll measure milk production and pasture production; and calculate the operating profit from each system.

The Scott Farm trials are being supported by work at the Southern Dairy Hub, where 32ha was re-grassed using either high- or low-ranked FVI cultivars in February 2017 (results will



*Drilling of the experimental pastures at Scott Farm in March 2018.*

be shared further down the track). This area has been managed under the Hub's standard farm management practices, with pasture growth information collected from weekly farm walks. This will allow us to answer the question: 'Are the predicted differences in seasonal DM yield from the FVI realised when cultivars are grown under realistic dairy farm management conditions in the Lower South Island?'

For more information on the FVI, see [dairynz.co.nz/FVI](http://dairynz.co.nz/FVI)

You can also check out the Southern Dairy Hub's partnership research programmes (including those on the FVI) at [southerndairyhub.co.nz](http://southerndairyhub.co.nz)

## Key points



1. Trials have started to test the FVI systems.
2. They'll compare high- and low-ranked FVI cultivars.
3. This research will measure milk and pasture production, and calculate operating profit.
4. This research will ensure the FVI's methodology is robust and it's a trusted tool for farmers.

# DairyNZ facility a world first in methane measurement



A groundbreaking methane research facility in Hamilton has been established at DairyNZ's Lye Farm. It's already yielding some interesting results from recent studies and has great potential for further research projects.

Managing and reducing dairy cows' methane emissions is crucial to the future of sustainable and profitable dairy farming in New Zealand. That's why, in 2015, DairyNZ worked with a collaborator in the USA to develop a novel system for measuring methane. This equipment, installed at DairyNZ's Lye Farm research facility two years ago, is a world first and it's already proving its worth.

The equipment and the experiments undertaken to date were funded by New Zealand's government to support the objectives of the Livestock Research Group of the Global Research Alliance on Agricultural Greenhouse Gases and the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC).

The Lye Farm facility involves multiple feeding stations that measure methane from the cow's breath while the cow is eating at different times each day. The facility's new equipment was compared for accuracy with 'respiration chambers' in collaboration with AgResearch, as respiration chambers are regarded as the 'gold standard' of measurement. The equipment passed with flying colours, with very similar daily methane emissions per kilogram (kg) of intake in both systems.

The facility at Lye Farm offers many advantages over respiration chambers. It can evaluate 30 animals at a time, whereas respiration chambers can test only four. It's also easier to test a wide range of feeds in the new facility and animals can be maintained on a treatment for much longer.

As part of her Masters degree, funded by the NZAGRC, researcher Holly Flay recently evaluated the effects of dairy breed on methane emissions and what would happen to methane emissions if we selected cows for improved feed conversion



*Methane from the cow's breath is measured as she eats.*

efficiency. Unfortunately, there were no 'lightbulb moments'.

Breed did not affect methane production: for each kg eaten, Jersey and Holstein-Friesian cattle released 22 grams of methane per kg of dry matter intake. Similarly, selecting animals for improved feed conversion efficiency didn't affect how much methane the animal produced each day.

DairyNZ is looking forward to realising the full potential of the Lye Farm research facility to carry out a range of other valuable projects. Future studies could include trialling compounds to reduce methane emissions in pasture-fed dairy cows.

Find out more about DairyNZ's involvement in *Dairy Action for Climate Change* and our other efforts to address dairying and climate change – see [dairynz.co.nz/climate](http://dairynz.co.nz/climate)



*The Lye Farm facility can evaluate up to 30 animals at a time.*

## Key points



**Three key advantages of DairyNZ's Lye Farm methane-testing facility:**

- 1.** It can evaluate up to 30 animals at a time.
- 2.** It supports longer evaluation sessions.
- 3.** It makes it easier to test a wide range of feeds.



Goal in sight: methane inhibitors have the potential to significantly reduce New Zealand's agricultural emissions. Photo: PGgRc and NZAGRC.

# Methane tools in the pipeline

Methane inhibitors are looking like one of the most promising tools to reduce New Zealand's greenhouse gas emissions from agriculture. Here's how your DairyNZ Levy is being used alongside other partner funding to contribute to the latest research.

The Pastoral Greenhouse Gas Research Consortium (PGgRc) aims to provide knowledge and tools for New Zealand farmers to mitigate greenhouse gas (GHG) emissions. The consortium works in collaboration with the New Zealand government and it's partly funded by farmer levies, including DairyNZ and Beef + Lamb New Zealand – two of eight funding partners.

PGgRc general manager Mark Aspin says the two problem greenhouse gases for New Zealand are methane and nitrous oxide.

"Methane inhibitors have the potential to reduce methane production by around 30 percent, so their widespread adoption by farmers would make a significant dent in reaching the country's reduction targets," he says.

"However, with New Zealand livestock eating grass 90 percent of the time, there are challenges to realising this potential, including how the inhibitor would be given to animals and ensuring the economics stack up."

## Methane production

Mark describes the rumen as a fermentation vat containing microbes that play a role in plant digestion and fermentation.

"Among those microbe species are methanogens. However, methanogens are not essential to the animal – in fact, they are opportunists. They use hydrogen gas, a by-product of fermentation, and combine it with carbon dioxide to produce methane and water. The methane is then released into the atmosphere when the animal belches."

## How methane inhibitors work

Scientists have identified chemical compounds that simply stop the methanogens from working, shutting down the process of methane production. A Dutch company is developing an inhibitor that works in a feedlot total mixed ration (TMR) system, where it can be mixed with feed and consumed continuously.

"This isn't practical in New Zealand's pasture-based system though," says Mark. "A practical delivery mechanism is therefore one of the challenges. Options, such as bolus capsules, are being investigated."

Conversations with potential commercial partners are underway. However, testing to rule out any impact on animals' health, welfare and productivity needs to be carried out, as well as ensuring there are no residue or food safety concerns.

## Methane vaccines

Meanwhile, New Zealand scientists are also working on a vaccine that stimulates the animal to produce antibodies that suppress key methane-generating microbes in the rumen of livestock.

"If widely adopted, an effective vaccine/inhibitor package could deliver emissions reductions of more than 20 percent – substantially larger than other mitigation options available presently," says Mark.

Both the inhibitor and vaccine approaches will require significant further development once they have established proof of concept, with delivery to the sector likely to be seven to eight years beyond that point.

## Key points



1. Methane inhibitors have the potential to reduce methane production by around 30 percent.
2. The challenge is identifying a practical delivery mechanism, such as bolus capsules, that will work in our pasture-based system.
3. Discussions with potential commercial partners for the development of the inhibitors are underway.

# Solutions to reduce N leaching and maintain profit

DairyNZ has invested your levy in research to find solutions for reducing nitrogen (N) leaching while maintaining farm profit, particularly through the Pastoral 21, Forages for Reduced Nitrate Leaching, Southern Dairy Hub, and Low-N Livestock initiatives. The N cycle shown here explains how solutions, developed through these projects and previous research, work to reduce N leaching. Visit [dairynz.co.nz/research](http://dairynz.co.nz/research) for results and key messages from the research.

## WHAT IS THE N CYCLE?

This N cycle graphic on the right shows how N inputs from fertiliser, feed and the atmosphere (through clover fixation) move from the soil to the plant, through the animal (using some for maintenance, growth and milk production), and out through urine and dung. It then moves back into the soil, where it is incorporated into organic matter or taken up by plants. Nitrogen is exported from the cycle via products (milk, meat and feed), and lost from the cycle via gas (volatilisation) and drainage (N leaching).

## HOW DOES N LEACHING WORK?

The difference between the N inputs and N outputs is called the N surplus. The whole-farm risk of leaching increases by 0.2 to 0.4kg N/ha for every kg increase in the N surplus.

Leaching happens when plant demand for N is low relative to N supply (e.g. in urine patches, or after a crop is grazed), and when drainage is high (e.g. high rainfall, over-irrigation, and on free-draining soils).

## Solutions for reducing N intake

1

- Reduce fertiliser and/or feed N inputs and match feed demand (stocking rate, culling and dry-off strategies) to the new feed supply to reduce the farm N surplus.
- Dry off cows early in autumn to reduce urinary N leading into winter, when drainage occurs and pasture growth is lower.
- Feed a low-N supplement such as maize or fodder beet instead of grass silage or kale, especially during the high-risk autumn/winter period.



## Solutions in the soil

4

- Organic matter holds onto N in a stable form but cultivation can cause the N to be converted to a soluble form and lost. Minimum tillage techniques such as direct drilling of crops and pastures will reduce N loss.
- Some research indicates the roots of plantain pastures may be slowing the conversion of ammonium (the N found in urine) to nitrate (the N that is lost), giving the plants a greater opportunity to use the N before it is lost. Research into this is ongoing.

## Solutions for managing inputs through fertiliser and effluent

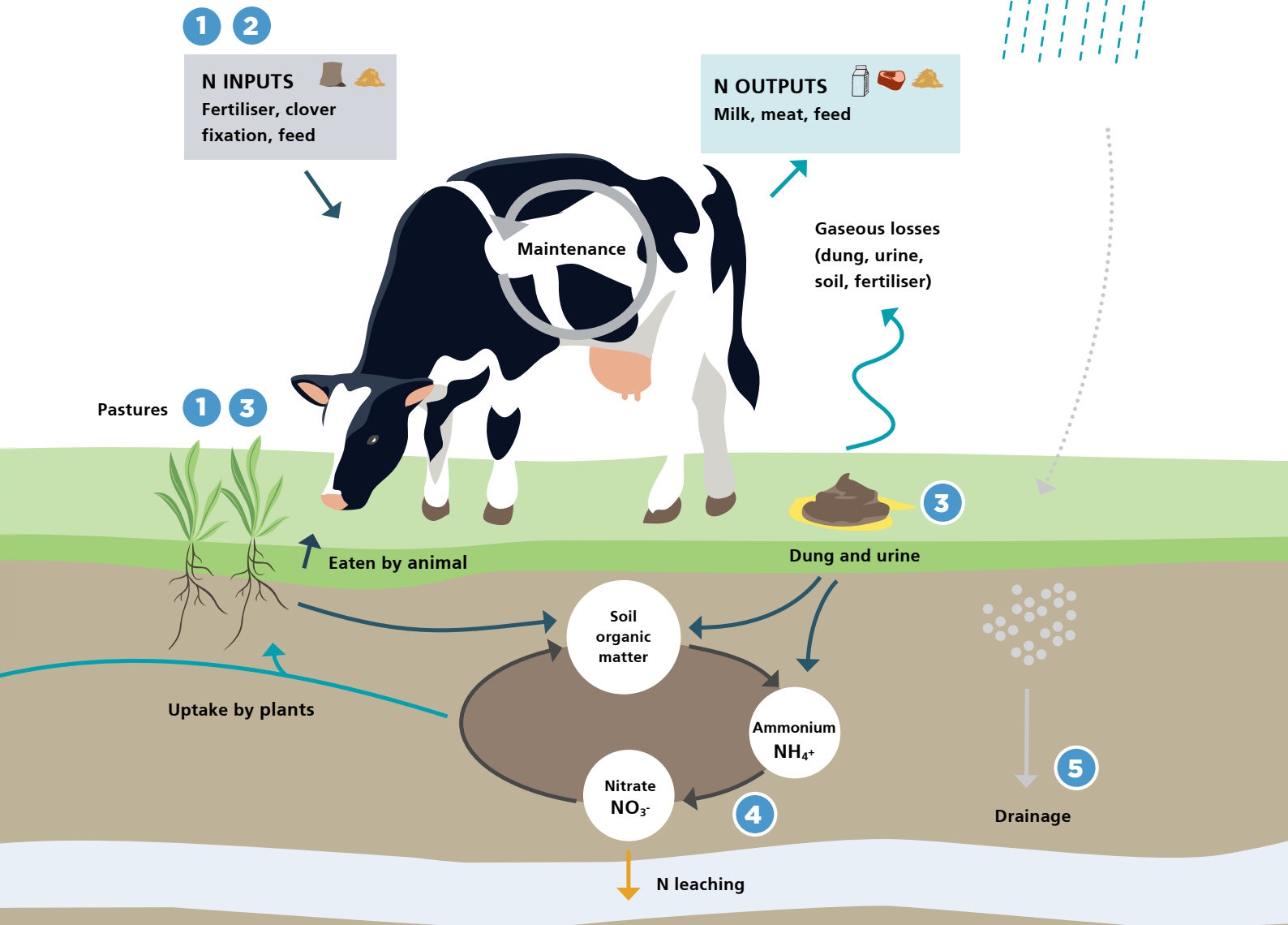
2

- Apply smaller and more timely N fertiliser inputs. Avoid late autumn/winter applications. Note: with lower-N fertiliser, more N will be fixed from the atmosphere by clover (Overseer assumes 0.4kg from fixation for every 1kg reduction in N fertiliser).
- Use stand-off facilities and spread effluent when plant use is high and the risk of drainage is low.
- Manage the size of the effluent area to prevent over-supply of nutrients.

## Solutions for reducing urinary N

3

- Plantain pastures have been shown to dilute the concentration of N in urine – spreading it over a larger area. Adding salt to the diet has also been shown to have this effect. Research into these solutions is ongoing.
- Some animals naturally excrete less N via their urine. A new seven-year study is underway to determine if this can be incorporated into a genetic trait (see *article page eight*).



## Solutions for reducing drainage and increasing plant uptake

5

- Manage irrigation to prevent over-watering and maximise plant growth and associated N uptake.
- Use winter active species such as Italian ryegrass to maximise N use in the high-risk months.
- Follow winter forage crops such as kale and fodder beet with catch crops such as oats to mop up the excess N.



## M. bovis: a letter from our chair

DairyNZ chair Jim van der Poel explains why we've jointly chosen to pursue the eradication of *Mycoplasma bovis* (*M. bovis*) and looks at how we'll support farmers in the weeks and months ahead.



As a dairy farmer and a representative of all dairy farmers in New Zealand, I believe the decision we made in May to eradicate *M. bovis* from our country represents hope.

I've been asked daily over the last month whether I believe it's really possible to eradicate the disease. I do. That's because our experts (an international team with experience of dealing with *M. bovis* in other countries) are telling us it's possible. They say we have one shot at it – which we must take now.

Our decision to continue with eradication is about ensuring the 99 percent of farmers who don't have it, don't get it. We will be doing everything we can to try and keep it off those farms.

But we know there are farmers doing it hard right now and it's a very personal situation. We're here to give those farmers the support they need.

I, personally, will continue pushing hard to put the right support package around those farmers who need it. Someone, whether it's from DairyNZ, the Ministry for Primary Industries or one of the other sector groups will be there to support affected farmers – however they are affected. Whether you need help

with form-filling, getting access to feed, forming management plans, or you just need someone to talk to or get advice from, we're here to help.

It's vital now, as we push towards phased eradication, that we all apply on-farm biosecurity measures, complete NAIT records, and access the right information to make good decisions. There's plenty of misinformation out there at the moment and I encourage all farmers to speak with one of the many farming groups, including DairyNZ, to seek accurate answers to your questions.

I thank the government and many other farming groups that have worked closely together to agree on a way forward for our country. And I thank you, our farmers, for doing your part to support us in the eradication of this disease by protecting your stock and your neighbours' stock. Please keep it up.

Find out more about *M. bovis* and protecting your farm at [dairynz.co.nz/mbovis](https://dairynz.co.nz/mbovis). Please don't hesitate to call us on 0800 4 DairyNZ (0800 4 324 7969) if you need to chat with one of our experts.



# Dairy ambassadors talk zero carbon

The dairy sector's 15 climate change ambassadors are taking the lead to build farmer awareness of greenhouse gases and the government's Zero Carbon Bill.

In May the dairy sector appointed a passionate group of climate change ambassadors from throughout the country. These ambassadors are not only serious about reducing on-farm greenhouse gas emissions, they're also keen to support their fellow farmers as the dairy sector looks at ways to reduce methane and nitrous oxide emissions.

Canterbury farmer and ambassador Theona Blom says she's still getting up to speed on the technical aspects of climate change, but she's quickly learned farmers are already doing great work.

"What has been a significant relief is the realisation that much of the environmental work farmers are doing right now is already helping to reduce greenhouse gas emissions."

Taranaki farmer Trish Rankin agrees. "The work farmers are already doing to improve water quality has the co-benefits of improving their greenhouse gas emissions. This is reassuring because the government is currently consulting on new legislation, the Zero Carbon Bill, which will set a plan for just how much we need to reduce our emissions by."

The Zero Carbon Bill will provide a vision for how New Zealand transitions to a sustainable and climate-resilient future. Proposals are currently out for consultation and New Zealanders have until July 19 to have their say. Of the three options presented, DairyNZ is supporting the proposal that New Zealand reduces long-lived gases (like carbon dioxide and nitrous oxide) to net zero, and reduces and stabilises short-lived gases (like methane) in accordance with scientific evidence.

"When the bill is introduced into Parliament later this year, it will be very difficult to make any substantial changes," says Northland farmer Andrew Booth. "It's really important that farmers fully understand the legislation and get their voice heard by the people drafting the bill."

"This isn't just on farmers," says Waikato farmer George Moss. "The transport sector has seen a 78 percent rise in carbon dioxide emissions since 1990 – so all New Zealanders need to think about their environmental footprint. Collectively, every little bit of change will help."

The climate change ambassadors are part of the dairy sector's



All 15 climate change ambassadors travelled to Wellington in May to meet with Climate Change Minister James Shaw, and hear from local climate change experts.



Wairarapa farmer and climate change ambassador Vern Brasell meeting with Minister James Shaw in Wellington in May.

commitment, through its *Dairy Action for Climate Change* plan, to help farmers understand climate change, the scientific research underway and the changes they can make on their farms right now.

Don't miss out – have your say on the Zero Carbon Bill by visiting [ourclimateyoursay.nz](http://ourclimateyoursay.nz)

# Award winners ‘living the dream’

After switching from desk jobs to dairying six years ago, a Northland couple has shone through at this year’s New Zealand Dairy Industry Awards (NZDIA). We meet them and the other winners.

Each year, the NZDIA recognises farmers who stand out from the herd by demonstrating an impressive range of skills across their farming businesses. Among this year’s winners are Dan and Gina Duncan, who claimed the NZDIA Share Farmer of the Year trophy.

Category head judge, DairyNZ consulting officer Kevin McKinley says, “They epitomise living the dream. They left secure jobs as registered valuers six years ago and made the career change to dairy farming, and they’re excelling at it.”

The Duncans are 50:50 sharemilkers for the Pouto Topu A Trust in Northland, milking 1020 cows on the 460ha property.

The couple say working on developing farms early in their dairy industry career was challenging but rewarding.

“A large amount of our time was focused towards a common farm goal that we set with the owners,” say the Duncans.

“We’ve achieved our goal of a quick progression through the sector, which we set when we changed our career. It was a big decision so we had to focus on the pathway.”

As well as the national title and \$49,700 in cash and prizes, the couple also won three merit awards: the Primary ITO Interview Award, the Ravensdown Pasture Performance Award and the Westpac Business Performance Award.

Meanwhile, Gerard Boerjan was named Dairy Manager of the Year and was described by the judges as an all-rounder with excellent attention to detail.

“Everything is well documented, he covers health and safety to an exceptional level and his financial understanding is of the highest calibre,” says DairyNZ judge Mark Shadwick.

“Gerard really cares about his staff; he cares about the environment, his cows, what he grows and how he grows it; but he also understands very clearly that he’s running a business.”

Gerard is farm manager for Trevor Hamilton on his 553ha Takapau property. He won \$22,600 in cash and prizes. Gerard also won

the DairyNZ Employee Engagement Award and the Westpac Financial Management and Planning Merit Award.

Simone Smail, 24, claimed the honours as 2018 New Zealand Dairy Trainee of the Year. Judge Chris Withy said Simone is an excellent example of someone who hasn’t come from a farming background but who has developed an obvious love of the land and the stock that she works with.

“Simone shows that anyone can go dairying and succeed if they work hard,” says Chris.

Simone is a herd manager working for Steve and Tracy Henderson on an Invercargill City Council farm, milking 780 cows on 310ha.

The inaugural winners of the NZDIA Farm Source Responsible Dairy Award are Edward (Wynn) and Tracy Brown from Matamata.

The NZDIA are sponsored by national sponsors: DairyNZ, Westpac, De Laval, Ecolab, Federated Farmers, Fonterra

Farm Source, Honda Motorcycles, Livestock Improvement Corporation (LIC), Meridian Energy and Ravensdown along with industry partner Primary ITO.

**“We’ve achieved our goal of a quick progression through the sector, which we set when we changed our career.”**



NZDIA national winners 2018: (left to right) Dairy Trainee of the Year Simone Smail, Share Farmer of the Year Gina and Dan Duncan, and Dairy Manager of the Year Gerard Boerjan.

DairyNZ Masters students (left to right) Holly Flay, Kieran McCahon, Charlotte Robertson, Louise Brok (absent: Caitlyn Poole).



## Meet the team: young faces at DairyNZ

**DairyNZ's Masters Scholarship programme provides multiple benefits for students and DairyNZ alike. Currently five students are gaining 18 months' farm systems project experience before they move on to a specialist area of study.**

DairyNZ's Masters Scholarship programme is just one way we support people in their dairy science studies (the others being an undergraduate scholarship programme and post-Masters opportunities). Current Masters students are Holly Flay, Caitlyn Poole, Louise Brok, Kieran McCahon and Charlotte Robertson. Each is working on a different dairy sector-relevant project under DairyNZ's animal and feed team.

"Everyone benefits," explains Jennie Burke, DairyNZ's research technical advisor. "Students gain financial support; see the relevance of (and contribute to) DairyNZ's work for farmers and the sector; build networks early in their career; and get exposure to a range of career opportunities.

"DairyNZ funds the programme, which enables us to provide the students with opportunities and run important one-off projects. Wider activities aligned with the programme also strengthen our networks with universities so we can identify top graduates early in their studies as part of succession planning and filling capability needs."

Student Charlotte Robertson's thesis is *Environmental and financial sustainability of farm businesses implementing FRNL principles*. It's linked to DairyNZ's Forages for Reduced Nitrate Leaching (FRNL) project. "It's an awesome opportunity: everyone at DairyNZ has been really helpful," enthuses Charlotte. "The farm systems-based project is perfect for me with my interest in developing environmentally-sustainable farming management practices. With its great links to the whole sector, DairyNZ is definitely the place to go if you're after an agricultural, environmental or dairy-related career."

Meanwhile, student Holly Flay's Masters project, *Correlations between methane production, residual feed intake and breed in*

*growing dairy heifers* finishes this month. Encouraged by DairyNZ school visits and seeing DairyNZ's Fieldays exhibit in Year 12, Holly gained a DairyNZ scholarship for study at Massey University. She also joined DairyNZ's summer internship programme in 2015/16, returning in February 2017 to complete her Masters.

**"With its great links to the whole sector, DairyNZ is definitely the place to go if you're after an agricultural, environmental or dairy-related career."**

"DairyNZ is such a special place – everyone's just so willing to help. It's incredible to know that you've got that support behind you. If you're considering doing a Masters within anything remotely dairy, DairyNZ's Masters programme would be the way to do it. It's connected with the 'real world': you can see how you and your project fits into the whole sector."

Jennie Burke says it's great to see the students' passion for the dairy sector and to have them inject new thinking into DairyNZ's teams. "They're the next generation of scientists and developers gaining a better understanding of farm systems early in their careers. They're excited about what their contribution to sustainable farms of the future will be – that's also where the wider farming community and the whole sector can benefit too."

Find out more about DairyNZ's awards and scholarships at [dairynz.co.nz/scholarships](http://dairynz.co.nz/scholarships)



# Pasture Summit growing dairy's future

**A new conference has been conceived by farmers who believe dairy farming can and should be profitable and rewarding, and that our pasture-fed products are best for the consumer and environment.**

Leading international dairy researchers and farmers will address these core elements at twin events in Hamilton and Ashburton in November.

The Pasture Summit is a collaboration between New Zealand and Ireland. Both countries share an international competitive advantage in the food sector which is dependent on excellence and innovation in pasture-based farming. The event will also help farmers make the most of the latest research into the relationship between dairy pasture systems and cow fertility.

Pasture Summit chair Colin Armer is a North Island dairy farmer with a keen interest in systems for profitable food production from grass. "The ability to remain consistently profitable through the fluctuations of commodity cycles in the dairy sector is an ongoing challenge. This summit is about people who are driven to create a prosperous future, producing food from pasture farming and knowing the benefits to consumers," says Colin, who is also a director of Dairy Holdings Limited and AgResearch.

Olin Greenan, North Island dairy farmer and conference organising committee member, chose to get involved in the summit because it reinforces what he believes dairy farmers should be doing. "For any enthusiastic grass farmer, young or old, these events are not to be missed. Farmers can come along to hear why New Zealand is a world leader in producing pasture-based food and ensure that this can continue for generations to come."

Instigated and organised by dairy farmers for dairy farmers, and with support from DairyNZ, the summit conferences will include:

- an assessment of current farm financial situations and the factors that underpin the most consistently profitable farms
- an exploration of where grass-fed dairy products fit with consumer need and other foods, and what can (and must)

be done to take advantage of healthy food and nutrition trends

- a session on the tools available (and those under development) to support pasture growth and help farmers be good custodians of the environment
- a presentation of the best and latest research into dairy pasture systems and cow breeding, including research on cow fertility
- a focus on building equity, with presentations from both established and growing farmers, outlining what they've done and are doing to reach equity growth goals (particularly in relation to farm ownership).

## PASTURE SUMMIT



**NORTH ISLAND  
HAMILTON**

**SOUTH ISLAND  
ASHBURTON**

**26 - 27th  
NOVEMBER  
2018**

**29 - 30th  
NOVEMBER  
2018**

The same selection of workshops will be provided at both conferences, with each workshop tailored to include relevant regional issues and solutions.

Register now at

**[PASTRESUMMIT.CO.NZ](http://PASTRESUMMIT.CO.NZ)**

## Fieldays kids ‘iPad’ their way into Rosie’s World



About 2500 parents and children visited DairyNZ’s education site at this year’s National Fieldays to experience how our programme is helping people learn more about dairy farming and where their milk comes from.

DairyNZ’s education programme (taught in more than one-third of primary schools and one-quarter of secondary schools nationwide) was shared more widely last month at the fiftieth National Fieldays at Mystery Creek near Hamilton. A highlight for children was the chance to meet the programme’s cowbassador, Rosie the cow, who provided lots of photo opportunities, endless hugs and plenty of high fives. This is one cow who really likes to be seen and ‘herd’!

### In a ‘class’ of our own

DairyNZ’s education programme site at Fieldays literally was a classroom: ‘The Classroom’ in the Heritage Village at Mystery Creek. It provided an ideal setting reminiscent of a real-life ‘Rosie’s World’, filled with entertaining and interactive learning – and everyone’s favourite cow – Rosie!

On display were some of DairyNZ’s latest in-school resources, such as the science lessons and experiments *Can it ice cream?* and *Can it cheese?* which saw about 18,000 children around New Zealand using milk and cream to make food products and learn the science behind how it happens.

### In-class iPads

The classroom also opened a door into ‘Rosie’s World’ online, with children using iPads to play Rosie’s games available on her website, picking up snippets of knowledge on dairy farming along the way. The ‘Gumboot Glory’ game (a bit like world-famous ‘Angry Birds’) was a favourite among children and adults alike.

### The Rosie Show

The live ‘Rosie Show’ on the central Village Green drew crowds of children and parents to its seven performances. The interactive show shared the story of city boy Matt who goes to visit his cousin Becky on the farm, learning a lot about rural life on the way.

DairyNZ external engagement manager Phillipa Adam says it’s great to see Rosie is well-recognised by many children from both urban and farming backgrounds.

“Fieldays is a great opportunity to receive feedback about the programme and see how children and adults interact with it.

## DAIRYNZ EDUCATION SITE



Urban children find Rosie intriguing and fun, while children from farming families resonate with her adventures.”

To find out more about DairyNZ’s education programme visit [dairynz.co.nz/education](http://dairynz.co.nz/education)

## It pays to put your people first



Keeping your team – including yourself – in top condition during the most demanding time of year is an important priority for savvy business owners this spring. DairyNZ's people management specialist Jane Muir outlines a few tips to get everyone in peak-performing mode.

People who are looked after well are more motivated and more productive. Not only will your business perform better, you'll be more likely to retain good staff over multiple seasons. Each employee needs to:

- understand what you're trying to achieve and why
- understand what you expect of them
- feel respected and valued
- have an opportunity to learn
- have all the basics in place (e.g. an employment agreement, decent hours of work, fair pay and a safe working environment)
- be living in warm, dry and safe accommodation.

### Top tips for tip top people

**Keep talking** – make sure everyone knows what needs to happen and what they're responsible for. Your mouth is also your best bit of safety gear!

**Celebrate** – celebrating a few small milestones and thanking people for their hard work during the busy period helps lift spirits and motivates your team.

**Eat well** – it's not always easy to get to the supermarket when things are busy or to cook when you're tired. Consider providing a daily main meal, especially if you have young team members or employees who live alone. Having plenty of healthy snacks, bottled water and hot drinks available during the day helps keep energy levels high too.

**Think safety** – accidents increase significantly when people are tired and busy. Encourage everyone to think about each task and how best to do it safely before they begin.

**Watch** – for signs of stress and fatigue. This is important all year round, but longer hours and the pressure of calving can increase problems. Encourage people to take regular breaks and look after their physical and mental health.

**Grab opportunities** – learning motivates people, so try to let your team practise what they've learnt in training, or show them new things. Many people learn on-farm by doing, so it doesn't always need to take much extra time.

Prioritising your team during calving will help ensure a successful spring with less stress for everyone. Visit [dairynz.co.nz/people](http://dairynz.co.nz/people) for more on good people management.



Carterton farmer Clarence Stolte keeps his team up to date with monthly 'dashboard' meetings.

### Managing hours during calving – the biggest win

Although people can 'work harder' for short periods of time, it's not sustainable (or acceptable) for them to do this for weeks or months. Dairying must find a new way!

Here are some good first steps:

- Record the hours worked by everyone on-farm – find out why and how at [dairynz.co.nz/timesheets](http://dairynz.co.nz/timesheets)
- Ensure everyone is paid fairly. Over calving, you might need to top up salaries or consider paying wages for each hour worked. Make it easy using a payroll system – check out [dairynz.co.nz/payroll](http://dairynz.co.nz/payroll)
- Check if work hours go above 50 each week – if so, consider employing one or more casual or fixed-term employees.

## Spring Rotation Planner's adaptability shines through

DairyNZ's Spring Rotation Planner (SRP) is proving its worth across a variety of conditions and situations, making pasture and feed planning much easier, more reliable and more manageable for farmers.

Last year's wet winter and spring made the SRP's application more challenging than normal. While some people questioned the SRP's suitability for such conditions, many farmers commented favorably on how the tool's adaptability helped them manage their pastures in the wettest spring for many years.

The SRP was developed in the 1980s from research into winter/spring rotation length and milksolids. It assists in managing the pasture cover decline from planned start of calving to balance date. The underlying principle is that average pasture cover on the farm during the change from winter to spring is a strong predictor of subsequent pasture growth and quality during the following months.

- Pasture cover that's too low – less than 1800 kilograms of dry matter per hectare (kg DM/ha) – reduces future pasture growth.
- Pasture cover that's too high reduces both future pasture growth and quality, potentially adding to future production costs from an increased reliance on higher-priced supplement.

Used properly, the SRP provides guidelines for allocating pasture to cope with the milking herd increasing and the dry herd shrinking. This helps farmers to avoid going too fast or too slow in the first grazing rotation after calving; control the rate

### What do farmers say?

"It's a really, really useful tool – and the fact that we'd never used it before, to have such a good result from it last spring was really comforting. It allows you to make really good management decisions along the way: you don't squander your existing grass and it keeps you focused on your future grass. People always say 'look after your cows and they'll look after you' – but really, they need to be saying 'if you look after your pasture that will look after your cows and they in turn will look after you'."

*Kaylene Aubrey, sharemilker, Tirau.*

"I've been using the SRP religiously over the last 10 to 12 years – I can't understand people who don't! I review the plan weekly in conjunction with my regular farm walks and I revise my feed budget as I go. It's a very easy tool to use and there is no guesswork. You know where you're going to be by balance date. Stick to it and you can't miss – it absolutely sets you up for the whole season."

*Paul Awaikera, sharemilker, Ashburton.*

of pasture cover decline on the farm so enough pasture remains to maximise pasture growth; and create high pasture quality for the coming rotations. The SRP also helps to minimise (but not eliminate) pasture deficits during spring, so supplement use is within the financial budget.

During last year's wet conditions, SRP farmers had the advantage of knowing exactly how much pasture they were short of, so their deficit recovery methods could be more accurately targeted, slowing the increase in area allocation on drier days and using supplements and nitrogen fertiliser more cost-effectively.

SRP users also develop good habits and don't just focus on today's feed allocation and today's milk production. Their management decisions consider overall production per cow for the season and not just at any one grazing. Because of this, they're more likely to meet consistent grazing residuals. If they do miss grazing targets due to unfavourable conditions, they can act quickly to sort it. Check out the Spring Rotation Planner at [dairynz.co.nz/srp](http://dairynz.co.nz/srp)



DairyNZ's Kevin Macdonald (left: one of the original SRP researchers) and Chris Glassey examine pasture as part of DairyNZ's Pastoral 21 project.

## Scholarship boost for dairy research

The winners of the 2018 Colin Holmes Dairy Scholarships this year are PhD students Stacey Hendriks and Martin Correa-Luna, who received their certificates at Massey University recently. The scholarships, co-funded by DairyNZ and Dairy Trust Taranaki, aim to encourage postgraduate research that will benefit the dairy industry. They're named after the university's Professor Colin Holmes (retired, 2007) who provided outstanding service to the dairy sector during his 40-year research and lecturing career.

Martin's PhD topic is the evaluation of the effect of stocking rate and animal genotype on profitability, complying with environmental impact requirements and once-a-day full-season milking. Stacey is examining the behaviour of transition cows as a means of identifying cows at risk of disease.

Read more at [massey.ac.nz](http://massey.ac.nz)



PhD students Stacey Hendriks and Martin Correa-Luna, this year's recipients of the Colin Holmes Dairy Scholarships.

## Ahuwhenua Trophy winners announced

The Ahuwhenua Dairy Awards held in Christchurch recently saw both award recipients acknowledging DairyNZ's role alongside other sponsors in supporting the awards to encourage positive change with Māori business.



Onuku Māori Lands Trust, a dairy farm based in Rotorua, won the Ahuwhenua Trophy BNZ Māori Excellence in Farming award. First awarded 85 years ago, this accolade aims to encourage Māori farmers to improve their land and overall farming position with an emphasis on sustainability.

Harepaora Ngahehu (26) from the Eastern Bay of Plenty performed a moving haka (captured in the photo above) after accepting the Young Māori Farmer of the Year award, which recognised his determination and hard work in overcoming adversity to achieve at a high level.

Read more at [ahuwhenuatrophy.maori.nz/news.php](http://ahuwhenuatrophy.maori.nz/news.php)



Students from the St Paul's agribusiness programme exhibiting at Fieldays last year.

## Agribusiness programme up for PM's Awards

DairyNZ congratulates St Paul's Collegiate School, Hamilton, whose agribusiness programme has been nominated for the 2018 Prime Minister's Education Excellence Awards.

"DairyNZ has supported this excellent initiative since the beginning and we're thrilled to see the school's nomination," says chief executive Tim Mackle. "The programme has completely transformed the teaching of agribusiness in New Zealand."

Selected from 127 entries, St Paul's is in the running for the Excellence in Leading – Atakura Award. The nomination recognises the school's agribusiness programme and proven success in leading change within the agricultural sector.

With backing from sector partners like DairyNZ, St Paul's was the first to create an agribusiness curriculum for secondary school students in New Zealand. The curriculum is now in 39 schools around the country. Winners will be announced at a ceremony on July 3. Visit [stpauls.school.nz/agribusiness](http://stpauls.school.nz/agribusiness)





# No barriers to learning

A shared passion for dairying has seen the women of the Taupiri-Orini Ladies Discussion Group connecting their community with the sector and its science for more than three decades. DairyNZ spoke to group members Gaylene Bunn and Bev Dyson to find out more.

Formed around 32 years ago, the DairyNZ Taupiri-Orini Ladies Discussion Group emerged thanks to Trevor Wooller (regional officer with what was then the Livestock Improvement Association) and original convenor, Bev Dyson. Trevor wanted to see better farm records being taken and he felt women on the farm did a better job of that task. These days, the group's supported by DairyNZ and consulting officer Jaimee Morgan, and Bev's still a group member.

"Women didn't have a voice in discussion groups then," explains Gaylene. "It wasn't so much that we were left out though: men's discussion groups were just more production-focused. We wanted to discuss what we were doing, get more women involved in dairying and be recognised for our contribution."

The group quickly gained an admired reputation for 'asking the curly questions'.

"We've also been really fortunate to have great speakers through connections we've built on along the way," says Bev.

Dairy farming set-ups have since diversified and the sector's split is now 50:50 women and men.

"A lot of young ones are coming through the group now, from mum and dad farmers, to people in equity partnerships," says Gaylene. "That 'farm worker to sharemilker to farm owner' path is not the only scenario out there these days. Also, the 'experts' are going to the farmer and finding out what they want, rather than just telling them what they should want."

Sustainable farming has gained significance in recent decades too, says Gaylene.

"Most of us know we need to look after our pasture and soil and our waterways – it's possible to farm sustainably without compromising economic success."

Bev agrees: "It's better to be proactive rather than reactive, and what we do on-farm is crucial to how our product is marketed internationally."

Annual trips have seen the group travel around both islands several times (and once to Tasmania): they've never missed one



The Taupiri-Orini Ladies Discussion Group get a great reception at DairyNZ's Newstead HQ in Hamilton.

**"The great thing about the New Zealand dairy industry is how we all share our information."**

yet.

"The great thing about the New Zealand dairy sector is how we all share our information," says Gaylene.

As well as visits on-farm, to research and science facilities and to manufacturing sites, the annual trips include a 'non-dairying' visit to learn something new: everything from eel farming, alpacas and ducks; to a seahorse farm and intensified beef farming in Tasmania.

Bev and Gaylene say the group also gets huge value out of their DairyNZ Levy, including DairyNZ apps, resources and support from their consulting officer, Jaimee Morgan.

Jaimee says it's been a pleasure working with the group over the last four years.

"They actively seek all the information available within the sector. Their experiences, learnings, networks and friendships have set themselves and their businesses up well to succeed and face many of the challenges ahead."

Want to join a DairyNZ farmer discussion group? Talk to your consulting officer – contact details at [dairynz.co.nz/CO](http://dairynz.co.nz/CO)

For the full list of what's on near you, visit [dairynz.co.nz/events](http://dairynz.co.nz/events)

## July events

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
						1
<b>2-10</b>	<b>NORTH OTAGO/CANTERBURY</b> Profitability benchmarking & wintering workshops sharing the latest findings and season-end performance results from the Lincoln University Demonstration Farm.				7	8
9	10	<b>11-19</b> <b>TOP OF THE SI/WEST COAST, CANTERBURY/NORTH OTAGO, SOUTHLAND</b> CalvingSmart: come along to a CalvingSmart event to ensure your team is prepared for the busiest time of the year.				
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

[DAIRYNZ.CO.NZ/EVENTS](http://DAIRYNZ.CO.NZ/EVENTS)

### NORTHLAND

A 231ha dairy farm near Awanui has shared its budget online. Along with 17 others nationwide, Dave and Heather Gray have opened their books, sharing where and why they're spending their money. They've been on the farm for 12 years, with average production for the last three seasons over 400kg MS/cow and 1200kg MS/ha. Their 2018/19 budget and farm plan aim to consolidate the changes from last season and capitalise on the earlier calving date.

Find out more at [dairynz.co.nz/budgetcasestudies](http://dairynz.co.nz/budgetcasestudies)

### BAY OF PLENTY

With former regional leader Sharon Morrell stepping into the role of Upper North Island hub lead, Andrew Reid has taken on the role of regional leader for the Bay of Plenty.

Many of you will already know Andrew, who grew up on a dairy farm near Whakatane, and prior to coming to DairyNZ held a variety of roles with Ballance. He is currently involved with coordinating DairyNZ's *Mycoplasma bovis* response and his experience will be a great asset to the Bay of Plenty team. See who's in the team at [dairynz.co.nz/CO](http://dairynz.co.nz/CO)

### TARANAKI

Sarah Dirks has been named as the new DairyNZ regional leader for Taranaki on a 12-month secondment. Replacing acting regional leader Simon Sankey, Sarah has spent the last eight years working as a consulting officer in the Waikato/King Country and developer in DairyNZ's animal productivity team. Born and raised on a farm in Iowa, USA, Sarah studied agriculture in her homeland as well Denmark and Uruguay, then moved to New Zealand dairy farming in Canterbury. View the Taranaki team at [dairynz.co.nz/CO](http://dairynz.co.nz/CO)



DairyNZ's new Taranaki regional leader Sarah Dirks (right), grabbing a selfie with dairy farmers Lynda and Mac Pacey.

## DairyNZ Consulting Officers

### LOWER NORTH ISLAND

Farmers can access a range of weekly data from farms in the Lower North Island and nationwide using DairyNZ's Farmwatch webpage, which also allows you to filter by region, farm and system type. The farms providing local data for the Lower North Island are located in the Wairarapa. Information includes pasture growth rates, rainfall, soil temperature, milk production and body condition scores. For more information, visit [dairynz.co.nz/farmwatch](http://dairynz.co.nz/farmwatch)

### TOP OF THE SOUTH/WEST COAST

This month the Top of South Island (July 3 and 4) and West Coast (July 10 and 11) will be running a full-day 'CalvingSmart' programme, with sessions for different experience levels. Topics will include care and recovery of down cows, calf rearing and general animal care. There will also be a focus on people – keeping your team happy and motivated during these busy and stressful months.

Register at [dairynz.co.nz/calvingsmart](http://dairynz.co.nz/calvingsmart)

### CANTERBURY/ NORTH OTAGO

Ensuring a 'well-oiled team' and keeping team morale high are two people-related topics featuring in CalvingSmart programmes being run in three towns down



Farmers brush up on their calving skills at CalvingSmart Whangarei in May.

south this month. The first will be in Dunsandel (July 12), followed by Hinds (July 13) and Waimate (July 17). The programmes are for the whole farm team with a series of sessions catering for different experience levels. Calving topics include what does a normal calving look and feel like; and looking after new born calves.

Register at [dairynz.co.nz/calvingsmart](http://dairynz.co.nz/calvingsmart)

### SOUTHLAND/SOUTH OTAGO

Practical tips for pre- and post-calving will ensure your team is prepared for the busiest time of the year with CalvingSmart events in Tapanui (July 18) and Winton (July 19). These full-day programmes focus on the wellbeing of both calves and people. They feature sessions structured for different experience levels, so everyone in your farm team will walk away having learned something valuable and relevant to their role on-farm.

Register at [dairynz.co.nz/calvingsmart](http://dairynz.co.nz/calvingsmart)

### Upper North Island – Head: Sharon Morrell 027 492 2907

#### Northland

Regional Leader	Sharon Morrell	027 492 2907
Far North	Denise Knop	027 807 9686
Lower Northland	Mark Forsyth	021 242 5719
Whangarei West	Sharon Morrell	027 492 2907

#### Waikato

Regional Leader	Wade Bell	027 285 9273
Senior Consulting Officer	Phil Irvine	027 483 9820
South Auckland	Mike Bramley	027 486 4344
Hamilton North	Aaron Traynor	021 809 569
Matamata/Kereone	Frank Portegys	027 807 9685
Morrinsville/Paeroa	Euan Lock	027 293 4401
Hauraki Plains/Coromandel	Annabelle Smart	021 242 2127
Te Awamutu	Stephen Canton	027 475 0918
Otorohanga	Michael Booth	027 513 7201
South Waikato	Kirsty Dickins	027 483 2205

#### Bay of Plenty

Regional Leader	Andrew Reid	027 292 3682
Consulting Officer, Special Projects	Wilma Foster	021 246 2147
Central BOP (Te Puke, Rotorua)	Kevin McKinley	027 288 8238
Eastern BOP (Whakatane, Opotiki)	Ross Bishop	027 563 1785
Central Plateau (Reporoa, Taupo)	Colin Grainger-Allen	021 225 8345
Katikati, Galatea, Waikite/Ngakuru	Jordyn Crouch	021 619 071

### Lower North Island – Head: Rob Brazendale 021 683 139

#### Taranaki

Regional Leader	Sarah Dirks	027 513 7202
South Taranaki	Ryan Orchard	021 246 5663
Central Taranaki	Sarah Payne	027 704 5562
Coastal Taranaki	Anna Arends	021 276 5832
North Taranaki	Lauren McEldowney	027 593 4122

#### Lower North Island

Horowhenua/Wanganui/South Taranaki/Southern and Coastal Manawatu	Kate Stewart	027 702 3760
Wairarapa/Tararua	Abby Scott	021 244 3428
Hawke's Bay	Gray Beagley	021 286 4346
Central/Northern Manawatu/Rangitikei	Jo Back	021 222 9023

### South Island – Head: Tony Finch 0277 066 183

#### Top of South Island/West Coast

Nelson/Marlborough	Mark Shadwick	021 287 7057
West Coast	Angela Leslie	021 277 2894

#### Canterbury/North Otago

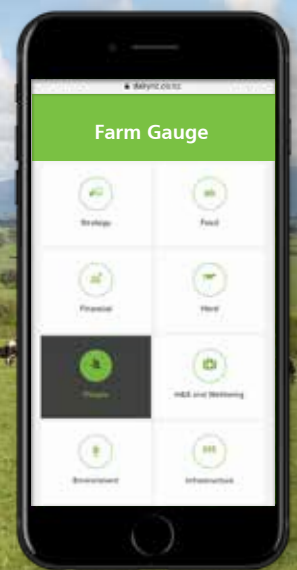
Regional Leader	Virginia Serra	021 932 515
North Canterbury	Virginia Serra	021 932 515
Central Canterbury	Natalia Benquet	021 287 7059
Mid Canterbury	Stuart Moorhouse	027 513 7200
South Canterbury	Heather Donaldson	027 593 4124
North Otago	Trevor Gee	021 227 6476

#### Southland/South Otago

Regional Leader	Richard Kyte	021 246 3166
South Otago	Mark Olsen-Vetland	021 615 051
Central/North Western Southland	Nicole E Hammond	021 240 8529
West Otago/North Eastern Southland	Liam Carey	027 474 3258
Eastern Southland	Nathan Nelson	021 225 6931
Western Southland	Teresa Anderson	027 702 2219

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