

# Inside Dairy

February 2020

Your levy in action



## SOLUTIONS IN SIGHT

TURNING SCIENCE INTO ON-FARM SUCCESS

Dairying's future  
What's coming  
in 2020?

"Unbelievable  
change"  
FeedRight's  
calving revolution

Mythbuster  
Is dilution the  
solution?



DairyNZ 



## over the fence...

This year is going to be a significant one for you, for the sector and for DairyNZ.

Welcome to the first edition of *Inside Dairy* for 2020. I hope you are having a great summer and have found time to relax with your family.

There's no doubt that 2020 will be a busy year. Not only will you get to cast your vote on the milksolids levy, but we also have a General Election and a range of Government announcements pending.

Probably the biggest announcement, expected over the coming months, is the Ministry for the Environment's Essential Freshwater proposals for water quality improvements. The consultation finished in October and the Government has been reviewing the almost 18,000 submissions.

DairyNZ will continue to keep you updated on all the news through our website, emails, Facebook and Twitter pages, information line, *Inside Dairy*, consulting officers and events.

In this edition, find out how we invest your levy in world-class research. Ultimately, this research will earn you greater returns by increasing your productivity through forage production and utilisation, better animals and efficient systems, with a lower environmental footprint. Through the Dairy Tomorrow strategy, we have a clear vision to improve lives with every drop of Kiwi milk; our scientific research enables us to achieve that.

Hear how Paeroa farmer Peter Casey overcame his herd's reproductive performance challenges, and how shifting to once-a-day milking has been life-changing for Dries Fourie and Dominic Groenendijk.

We explore what scaling back antibiotics looked like for Brendon and Rochelle O'Leary, and how DairyNZ's FeedRight training helped LeAnne Blakelock deal with milk fever issues.

For those suffering from very dry conditions this summer, check out our website for useful tips and advice.

We're hosting Farmers' Forum events around the country this and next month, and I encourage you to head along. They're always packed with useful information, keeping you up to date on the latest research, learning and farmer case studies. See page 22 for more.

I appreciate your feedback, so please email me with any thoughts on this edition or ideas for future articles – [tim.mackle@ceo.dairynz.co.nz](mailto:tim.mackle@ceo.dairynz.co.nz)

**Tim Mackle**  
Chief executive  
DairyNZ



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On the cover: Paeroa farmer Peter Casey and DairyNZ senior scientist Dr Susanne Meier discuss the Pillars of a New Dairy System research programme.

# TAKE 5... TIPS FOR FARMERS

## 1. Help is at hand



DairyNZ's confidential, nationwide Early Response Service (ERS) supports farmers when concerns are raised about livestock wellbeing. Our experienced staff support farmers to get their animals and farms back on track. If you are concerned about dairy stock, freephone **0800 4 324 7969** or visit [dairynz.co.nz/early-response](http://dairynz.co.nz/early-response)

## 2. Prevent strains and injuries

Farmstrong has teamed up with VetSouth to produce a series of one-minute videos on simple things you can do on the farm to avoid common strains and recover from injuries. Check them out at [farmstrong.co.nz](http://farmstrong.co.nz)

## 3. Know your number



Your 6-week in-calf rate is your comparable figure for assessing repro performance across farms and seasons. A recorded 'empty' rate doesn't paint the full picture and is like comparing apples with elephants. Get your number from your Fertility Focus Report and learn more at [dairynz.co.nz/reproduction](http://dairynz.co.nz/reproduction)

## 4. Moving stock

When walking stock for short distances across or along public roads, ensure the safety of people, cows and other road users, by following council and/or NZ Transport Agency requirements. For tips on cow safety and comfort when transporting stock by truck, see [dairynz.co.nz/transportingstock](http://dairynz.co.nz/transportingstock)

## 5. Water use wisdom



Saving water can be especially challenging over summer. Try pre-wetting milking shed yards with a hose or sprinkler to prevent dung sticking. You'll use less water at washdown. Get more tips on efficient water use and reducing water loss at [dairynz.co.nz/wateruse](http://dairynz.co.nz/wateruse)

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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).



# More profit, smaller footprint

## Investing your levy in science



Ten years ago, the dairy sector set itself an ambitious research target: 'Increase profit by \$110/ha year while decreasing footprint by 30 percent'. DairyNZ strategy and investment leader Bruce Thorrold looks at how we're tracking. \_\_\_\_\_

When John Penno left Dexcel to devote his energy to Synlait, he said something that's become my favourite quote: "Most people overestimate what they can achieve in one year, but underestimate what they can do in a decade."

Google attributes this quote to many people, including Bill Gates and Tony Robbins, but I'm not worried about who said it first. The achievements of Bill, Tony and John all point to it being true.

Similarly, there's been huge progress made in dairy science over the past decade. Collectively, we've applied focus, effort and your levy towards this clear, long-term goal. So, how are we tracking?

### Lowering our footprint

We've made great strides in reducing our footprint. The Pastoral 21 programme showed that, by reducing nitrogen surplus and using off-pasture infrastructure at key times, we can lower nitrate leaching by 30 to 40 percent in all New Zealand regions.

The Forages for Reduce Nitrate Leaching (FRNL) programme has given us more options. Plantain, fodder beet and cover crops all show ability to reduce nitrate loss within an outdoor grazing system.

Footprint isn't just nitrogen though – research into winter cropping has proved the management practices that can substantially reduce sediment and phosphorus loss.

The last decade of methane research has re-written our understanding of rumen microbes. Right now, there are feed additives in final trials overseas that are credibly claiming to reduce methane emissions by 30 percent in feedlot dairy systems.

In New Zealand, the Pastoral Greenhouse Gas Research Consortium (PGgRc) is leading the way in methane research for pastoral systems, with unique feed additives, vaccines and genetic solutions.

*DairyNZ's research team is currently testing the Forage Value Index to see how well it performs under realistic farm management conditions.*



AgResearch has developed a genetically modified ryegrass that, as well as having improved photosynthesis, has higher lipid levels that might reduce methane production from cows. It's big news all of a sudden, but this is the result of 20 years' research.

### Increasing our profit

Our 2010 target wasn't just about reducing footprint – the aim was to increase profit at the same time. Research farm results show that these large footprint gains often come at some cost to profitability. We don't yet have the win-win technologies and systems required, or the price premiums for low-footprint milk, to hit that 2010 target.

To increase potential profits from our pastoral systems, research has aimed to increase homegrown feed (the major source of profit) or feed conversion efficiency.

With pastures, the picture was cloudy back in 2010. DairyNZ and the seed companies went back to square one and built the Forage Value Index (FVI) system, which gives guidance to plant breeders and independent information to farmers. We're currently testing the FVI's accuracy in a farmlet experiment.

The rate of gain in plant breeding (measured by FVI) will be enhanced by new technologies that were still in development 10 years ago. The work of Pastoral Genomics means local seed companies will soon be using genomic selection in ryegrass to accelerate genetic gain. New hybrid ryegrass technologies developed by DairyBio in Australia (and with the DairyNZ Levy) are now in field trials. These technologies will be in your hands over the next decade.

With feed conversion efficiency, a major driver is the ongoing increase in cow genetic merit. While we are confident in the production gains, cow fertility has remained a weak link. The Pillars programme has shown the importance of genetic control of fertility. Now we're building this new understanding into animal evaluation, so Breeding Worth gives you a more accurate estimate of fertility – and more fertile cows.

Improved forage production risks increasing methane output and N leaching. New research will need to bring better forages, cows and technology together in farm systems that meet all the goals of Dairy Tomorrow, our current sector strategy.

### Farmer-driven change

Not all our gains have been strategy-led. Farmers have innovated

and demanded research to support their system changes. Fodder beet is a great example of rapid farmer-driven change – with science struggling to keep up. We now have clear guidelines for cow feeding and transition, and mineral requirements. We're working with Overseer to include the nitrogen-cycling benefits of fodder beet.

### Leveraging your levy

All these important research topics are being tackled by combinations of government funding, commercial investment, and your levy. For every \$1 of your levy we invest in research, I estimate we see a further \$3 of other investment into joint projects, with even greater investment by others into the fundamental, long-term science.

### A new decade

All New Zealanders will have to make changes to meet Zero Carbon Bill and Essential Freshwater targets. The Primary Sector Council's vision, 'Fit for A Better World', aims to provide the world's most discerning consumers with outstanding, ethically produced food. That's all core business for dairy farming in Dairy Tomorrow – which also includes world-leading animal care and workplaces, along with resilient farm businesses and communities.

The progress we've made gives me confidence that, if we tackle the next 10 years with the same focus, innovation and collective effort, we'll be amazed at what we've achieved by 2030.



At DairyNZ's Lye Farm research facility in Hamilton, feeding stations are used to measure methane from the cow's breath while the cow is eating at different times each day.

A man in blue overalls is walking through a lush green field. In the background, a black and white cow is grazing near a wooden fence. The scene is bright and sunny, with small yellow flowers scattered in the grass.

# STRONGER THROUGH SCIENCE



DairyNZ's scientific research is delivering real on-farm solutions for dairy farmers.

*Inside Dairy* caught up with one farmer who's contributing to a major study, and another who's made a significant milking change based on our research results.

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## **FERTILITY RE-FOCUS PAYS OFF**

Peter Casey faced challenges with his herd's reproductive performance from the day he returned to the family farm in 2006. But the problem became even more noticeable during a drought two years later, a tough time for everyone in the Paeroa district.

"We were short of feed, our young cattle were struggling, and we had a high 'empty' rate. This was taking a toll on the farm financially, and I realised that I needed to make changes."

Peter had grown up on the farm but went off to work as a builder for seven years. When his dad wanted to step back from farming, Peter decided to swap carpentry for cows. His first challenge was to improve the herd's fertility.

## Taking the bull by its horns

After chewing the problem over with Ken Cummings, a former LIC technician, Peter decided to change tack from 'bull of the day' to nominated sires.

"I began by studying the LIC catalogue and choosing bulls I liked. I usually choose six bulls for the team and the traits I pick are high fertility, easy calving and breeding worth. It's a bit more expensive than 'bull of the day', but I think the extra cost has been worthwhile. Why would you put a low-fertility bull into a low-fertility cow? It doesn't make sense," says Peter.

"I've got to know the bulls, and now I look at heifers in the paddock and know whose progeny they are. It's an interest I've developed and now enjoy."

Peter also takes advice from Dr Bruce Nicol at Paeroa's Franklin Vets, who says Peter is doing a great job with his young stock.

"Over the years, Peter's stockmanship has improved and he's proactive when it comes to treating his animals."

This treatment ranges from CIDRs (controlled internal drug release) for non-cyclers, to a regular vaccination and worming programme and liver tests to diagnose mineral deficiencies.

The number of non-cycling cows has lessened over time, says Peter.

"This year we only had 17, which is less than five percent of the herd."

## Rising to the top

As a result of these changes, Peter has seen his herd's 6-week in-calf rate increase to 87 percent, putting the herd among the best in the country.

Peter says having 90 percent of heifers calving in the first three weeks brings gains apart from milk in the vat.

"They recover from calving quicker and, if grown well, cycle quicker. You also have options when more cows are in calf and you can sell surplus animals which helps with cashflow."

## Contributing to research

Some of Peter's animals are part of a DairyNZ-led research programme called Pillars of a New Dairy System\*, in which researchers are seeking genetic solutions to improve cow health, fertility and longevity.

To test the robustness of the current Fertility Breeding Value (BV) and identify new measures of fertility, DairyNZ generated a unique herd of heifer calves with a 10-point difference in their Fertility BV (-5 percent versus +5 percent), known as the Fertility BV Animal Model.

In 2014/15, some of Peter's cows were contract-mated to provide low-fertility calves, and now his heifers are involved in ongoing studies to see if puberty could be an early measure to accelerate genetic improvement in fertility.

## On-farm results reflect levy research

DairyNZ senior scientist Dr Susanne Meier says Peter's actions align with the outcomes of the Pillars research.

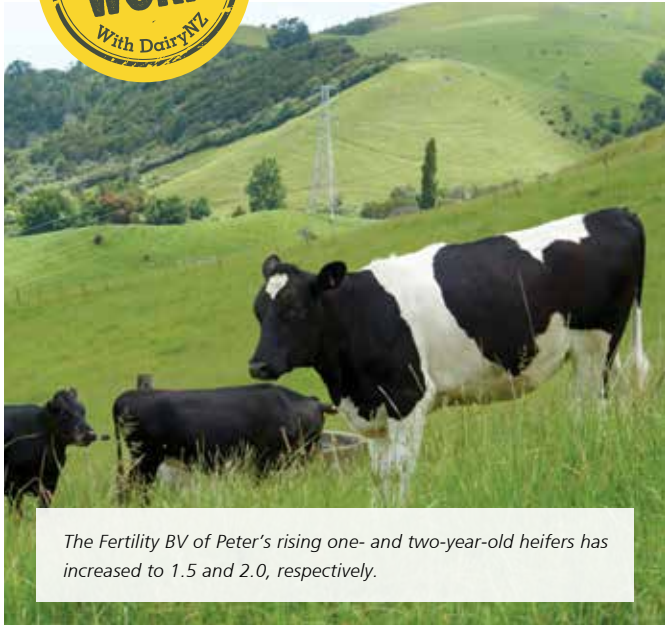
"The focus of the Fertility Animal Model is to understand and identify early and novel measures to accelerate genetic improvement in fertility. Our findings confirm that genetic fertility can contribute to high reproductive performance. Peter has increased the Fertility BV of his rising one- and two-year-old



**"Why would you put a low-fertility bull into a low-fertility cow? It doesn't make sense."**

*Susanne shares Pillars research results with Peter.*





The Fertility BV of Peter's rising one- and two-year-old heifers has increased to 1.5 and 2.0, respectively.

heifers to 1.5 and 2.0, whereas his lactating cows have a Fertility BV of 0.65.

"Our research with the Animal Model shows that heifers with high Fertility BV reach puberty earlier and have a higher 6-week in-calf rate. Cows with high Fertility BV have higher three-week submission rates and 6-week in-calf rates. The Fertility BV changes in Peter's young stock show that he's breeding a more fertile herd."

Susanne says national statistics indicate a large opportunity for improving the 6-week in-calf rate. The sector average is 68 percent, well below the sector target of 78 percent. Top-

**"Our findings confirm that genetic fertility can contribute to high reproductive performance."**

performing farms average more than 73 percent (top 25 percent), while the bottom 25 percent is less than 63 percent. (Data sourced from NZ Dairy Statistics 2018/19.)

"This illustrates the scale of the challenges and the opportunities for improving herd repro performance," says Susanne.

Peter says he's impressed with the DairyNZ Pillars research as he didn't fully appreciate the impact that quality young stock have on future fertility.

"You can see where your levy money is going. Sometimes there's negativity about paying the levy, but when you see how detailed these projects are, from taking blood samples to the analysis and so on, it's got to be a good thing for the sector."

■ Words: Christine Hartley ■ Photos: Craig Brown

## PETER'S TOP TIPS FOR RAISING GOOD HEIFERS

- Improve the Fertility BV of your herd – if you nominate bulls, set time aside to study the catalogue. It's worth it.
- Train staff so they understand your priorities.
- Seek and listen to your vet's advice.
- If you graze stock off-farm, check them regularly to ensure they're being well fed. Feeding is the key to a healthy herd.
- To avoid heat stress in the summer, milk young cows once-a-day. It helps them to maintain weight and sets them up well for the next season.

Further information at:

[dairynz.co.nz/pillars](https://dairynz.co.nz/pillars)

*\*The Pillars of a New Dairy System programme is levy-funded, with matched co-funding from the Ministry of Business, Innovation and Employment (MBIE) and aligned core funding for fertility from AgResearch. Additional in-kind support is received from LIC, CRV Ambreed and Fonterra.*

## FARM FACTS

**OWNERS:** Peter & Terri Casey

**LOCATION:** Paeroa, Waikato

**FARM SIZE:** 115ha (effective) milking platform and 26ha grazing block

**HERD SIZE:** 380 Holstein-Friesian

**FARM SYSTEM:** 3

**PRODUCTION:** 145,000kg MS/year

Clockwise from bottom left: contract milker Dries Fourie and farm owner Dominic Groenendijk wonder why they didn't shift to once-a-day milking earlier; the King Country's volcanic hills offer a stunning view from the dairy; farm assistant Hennie Groenewald spends less time milking since the shift to once-a-day.

"Once we had the research at our fingertips, we decided it was a no-brainer."

## ON TOP OF THE WORLD IN THE KING COUNTRY

At Oparure, northwest of Te Kuiti, a steep limestone tanker track winds its way up to a 245m hilltop dairy platform.

This is tricky country for dairying and comes with its own set of challenges, says contract milker Dries Fourie.

"These challenges include paddocks up to 1.7km from the dairy shed, which means long walks for the animals. At one point, we had 80 cows in the lame mob," says Dries.

"Getting good staff to work here was also difficult, especially when they saw the farm."

### 'On a hiding to nothing'

The farm's owner, Dominic Groenendijk, says over the years, he and Dries had tried to increase their per-cow production

without success.

"In 2017/18, we decided to drop our stocking rate from 460 to 410 to focus on per-cow production. We went from 2.6 cows to 2.2 cows/ha," says Dominic.

"We came to the conclusion that we were on a hiding to nothing. Dries and I had been talking about milking OAD for a couple of years but Dries was worried about the loss of production, and I didn't want to force him into it."

### Swayed by science

The tide turned in June 2018, when Dries and his wife Toi went to a DairyNZ-run once-a-day (OAD) milking conference in Palmerston North, keen to explore the pros and cons.

"Hearing from DairyNZ's Dr Paul Edwards about the research and seeing the evidence he presented made the decision easy for us," says Dries.

"Once we had the research at our fingertips, we decided it was a no-brainer. At that stage the cows were dry anyway, so we made the decision to start at the beginning of the 2018/19 season."

## A decisive change

For Dries and Dominic, the benefits of milking OAD have been numerous. On a personal level, stress reduction is at the top of the list.

"It's really quite amazing how much more work we're getting done," says Dominic. "Two guys are not tied up for three-and-a-half hours in the afternoon and this gives us six extra hours in the day. Everyone is more positive too."

There's been a marked improvement in animal health. Cow condition has improved, and lameness has reduced.

"This year we dried off on June 6, whereas previously we dried off in May, so we've had a month's extra production. Last season, we treated about 15 cows for lameness and this has

**"The biggest obstacle to going OAD was making the decision."**

reduced to five or six, so that's a lot better too," says Dries.

The most notable improvement has been to animal fertility and in-calf rates.

"We had a 6.8 percent 'empty' rate last year, compared to the previous year of 14 percent and our calving spread has improved too. The mean calving date was 14 days after the start of calving, which was eight days earlier than the year before, and the last cow that calved was 22 days earlier than the year before. This year, in the first three weeks, we had a submission rate of 93 percent," says Dries.

Dominic says the reduced calving spread means their cows are in milk earlier and production is up 24 percent so far this season, albeit with 50 more cows.

"The biggest obstacle to going OAD was making the decision. For eight years we couldn't get the per-cow production above 320kg MS/year, so we thought, 'Let's stop trying'. Now we look back and wonder why we didn't start OAD sooner."



*DairyNZ senior scientist Dr Paul Edwards has been evaluating OAD milking and its potential to improve the on-farm work environment.*

## DRIES & DOMINIC'S TOP TIPS FOR GOING OAD

- If you can't lift per-cow production above 320kg MS/year, just do it.
- If you have problems with lameness, just do it.
- Get good information about OAD. Go to a DairyNZ OAD seminar. Hearing from researchers and other farmers will give you confidence to make the decision.
- Even partial OAD can be beneficial (e.g. milking heifers OAD improves in-calf rates).

Further information at:

[dairynz.co.nz/oad](https://dairynz.co.nz/oad)

## FARM FACTS

**OWNERS:** Dominic Groenendijk & Katrin Woermer

**CONTRACT MILKER:** Dries Fourie

**LOCATION:** Oparure, King Country

**FARM SIZE:** 170ha (effective dairy platform) and 135ha dry stock block

**HERD SIZE:** 465 Friesian-Jersey cross

**FARM SYSTEM:** 2

**PRODUCTION:** 118,800kg MS/year (with 410 cows)

# What's ahead for dairy in 2020?

Two game-changing developments and a levy vote will make this year a significant one for dairying, writes DairyNZ chair Jim van der Poel.



As we head into another year, there's a sense that the environment in which we farm is evolving. There are a range of initiatives on the horizon that will be transformational for dairying.

## He waka eke noa

Last October, the Government accepted the farming sector's proposal – He waka eke noa – to replace the Government's original objective of bringing farming into the Emissions Trading Scheme and introducing a processor levy. He waka eke noa is a five-year plan to ensure every farmer knows where their emissions are coming from and what they can do to manage them.

In our view, this partnership between the farming sector, the Government and Māori has a much better chance of achieving a better practical outcome for everyone. It will ensure all farms have a Farm Environment Plan (FEP) by 2025, and that an enduring farm-level emissions reduction framework is built.

2020 will be the first year of He waka eke noa. We'll be setting common standards for on-farm reporting of greenhouse gases, and working to include greenhouse gas emissions in FEPs. This will ensure every farmer knows their emissions 'number' by 2022.

## Essential Freshwater

We are awaiting the outcome of the Government's Essential Freshwater policy, which attracted nearly 18,000 submissions.

The policy came at a busy time last spring, yet many farmers wrote submissions and attended meetings. Thank you all for that. It shows your high level of engagement and your commitment to finding practical solutions for everyone.

DairyNZ made a submission on behalf of dairy farmers, providing evidence-based research and analysis. Our analysis showed the proposal, as it stands, would cost \$6 billion per year by 2050. Our submission highlighted that water quality targets could still be met without disrupting proposals in their present form.

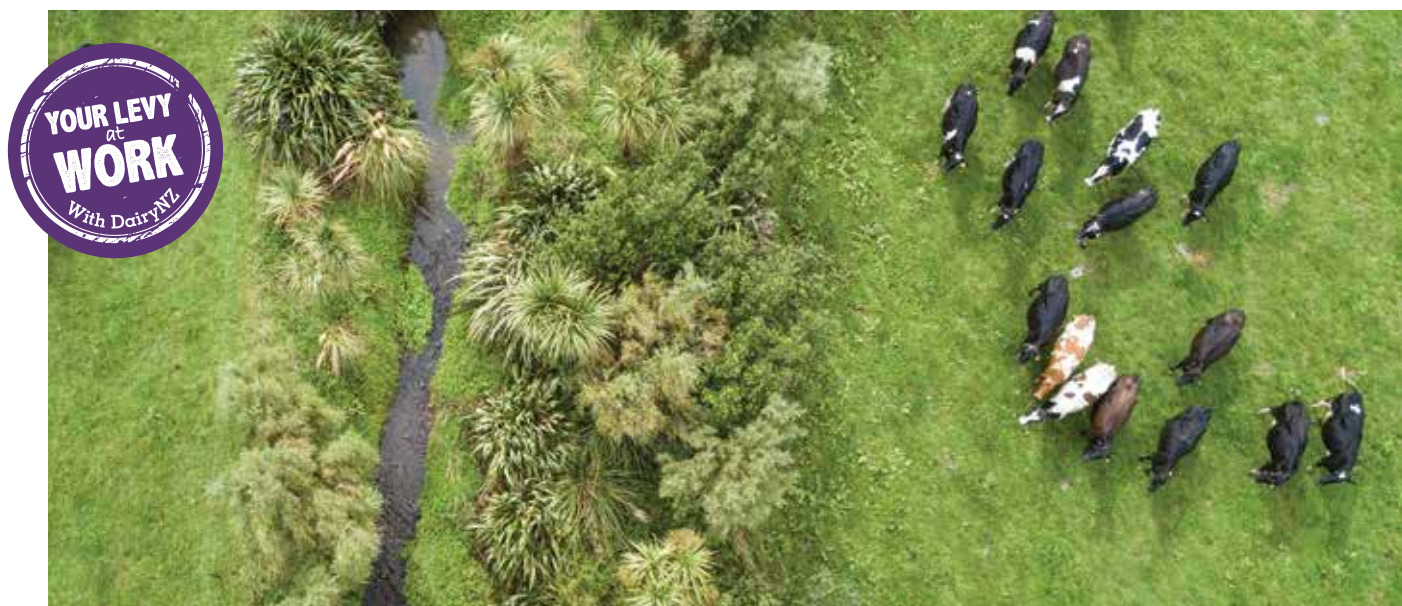
We'll be aiming to influence the Essential Freshwater outcome and will continue to represent and support farmers.

## An important vote

We'll be asking for your vote on the DairyNZ Levy in May. Every six years, you have the opportunity to vote to continue the DairyNZ Levy, as the industry-good body that represents dairy farmers.

All levy-paying farmers will receive voting packs in the post from late April. I encourage you to get involved in the process and ensure your neighbours and friends have their say too. DairyNZ is your organisation – it's important we receive your vote during May.

Finally, I look forward to another productive year on the farm. After all, that's what we are about – running efficient, effective and sustainable farms that create a good life for our families.



# Spring calving ‘revolutionised’

LeAnne Blakelock and her team had a major turnaround on long-held milk fever issues after attending DairyNZ’s FeedRight training course.

Taranaki dairy farmer and chartered accountant LeAnne Blakelock and her partner Ian Powell bought a 400-cow spring calving dairy farm with her parents five years ago. The farm was having massive milk fever issues, losing as many as 10 to 15 cows each season to milk fever complications alone. Then she signed up for a DairyNZ FeedRight course.

## Changes in action

After attending her first FeedRight course workshop in April, LeAnne arranged an independent body condition score (BCS) of her entire herd.

“As we dried off, cows were split into five calving mobs, based on body condition score and calving dates. We also bought extra silage and sent cows out to winter grazing rather than wintering on PKE. We didn’t have any fodder beet this year,” she says.

“Springers were fed energy at 90 percent of requirements and calcium was kept low. We were also hugely strict on calculating grazing areas as cows calved and the numbers moved.”

## Results speak for themselves

LeAnne says the first 260 cows calved, with only seven mild cases of milk fever.

“It got a little trickier to manage in the second half with second round grass. However, overall we had approximately 25 milk fever cases with two deaths.

“Of those affected cows, most got back to the dairy under their own steam or got up within 15 minutes following paddock treatment. In past years, we would have up to 12 down cows with milk fever in any given day.

**“This is an unbelievable change in our calving experience. We’ve had more free time and so much less stress.”**

“The cows have transitioned beautifully, with minimal retained membranes. They’re on a very strong upwards plane now [and are] an overall healthier herd.”

## A new way ahead

LeAnne says they’d spent years consulting with farm advisers, vets and feed reps.

“Until now we’d never found a solution, despite paying thousands for advice.



*LeAnne Blakelock credits DairyNZ’s FeedRight course with a big improvement in the overall health of her herd.*

“We really can’t thank the FeedRight team enough. The workshops have revolutionised our farm spring calving and are one of the best-facilitated that I’ve ever attended.”

## Science into practice

DairyNZ senior scientist Jane Kay says LeAnne’s feedback highlights the pathway that exists from DairyNZ’s science to on-farm implementation.

“I was lucky enough to be involved in this entire pathway, from the on-farm research that investigated feeding levels pre-calving, to the development of key messages, and their communication through the FeedRight resources and workshops,” says Jane.

“It’s very rewarding to turn research into actionable knowledge – and to hear that this has ‘revolutionised’ a farming system is pure gold.”

DairyNZ will be running more FeedRight courses in 2020, based on demand. Register your interest at [dairynz.co.nz/feedright](https://dairynz.co.nz/feedright)

### High Fertility BV cows have better in-calf rates

DairyNZ's studies using 500 cows with high (+5%) and low (-5%) Fertility Breeding Values (BV) showed that:

- high Fertility BV cows have over 30% higher 6-week in-calf rates during lactations 1 and 2
- final not-in-calf rates are very poor (approximately 40%) in low Fertility BV cows, reducing survival between lactations.

Using high Fertility BV bulls to breed replacements will increase 6-week in-calf rates and reduce not-in-calf rates.

### High Fertility BV cows cycle better

We showed that high Fertility BV cows have a significantly greater ability to resume cycling after calving. This leads to increases in pre-mating heats and submission rates.

In contrast, low Fertility BV cows have a serious non-cycling problem. Our high Fertility BV cows had an 87% three-week submission rate during lactation 1, whereas low Fertility BV cows had only 48%. New traits using pre-mating cycling and heat characteristics may improve genetic selection for fertility.

### Improving transition cow health

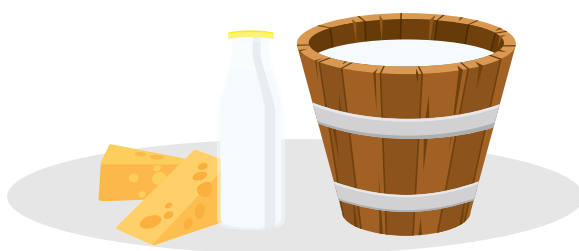
A smooth calving transition contributes to optimal cow health, fertility and longevity. Our studies showed:

- feeding synthetic zeolite pre-calving reduces risk of clinical and subclinical milk fever. We are now testing its effects on uterine health and reproduction
- changes in lying and activity behaviours using wearable devices could predict onset of calving and metabolic disease.

### Using heifer traits to accelerate genetic gain in fertility

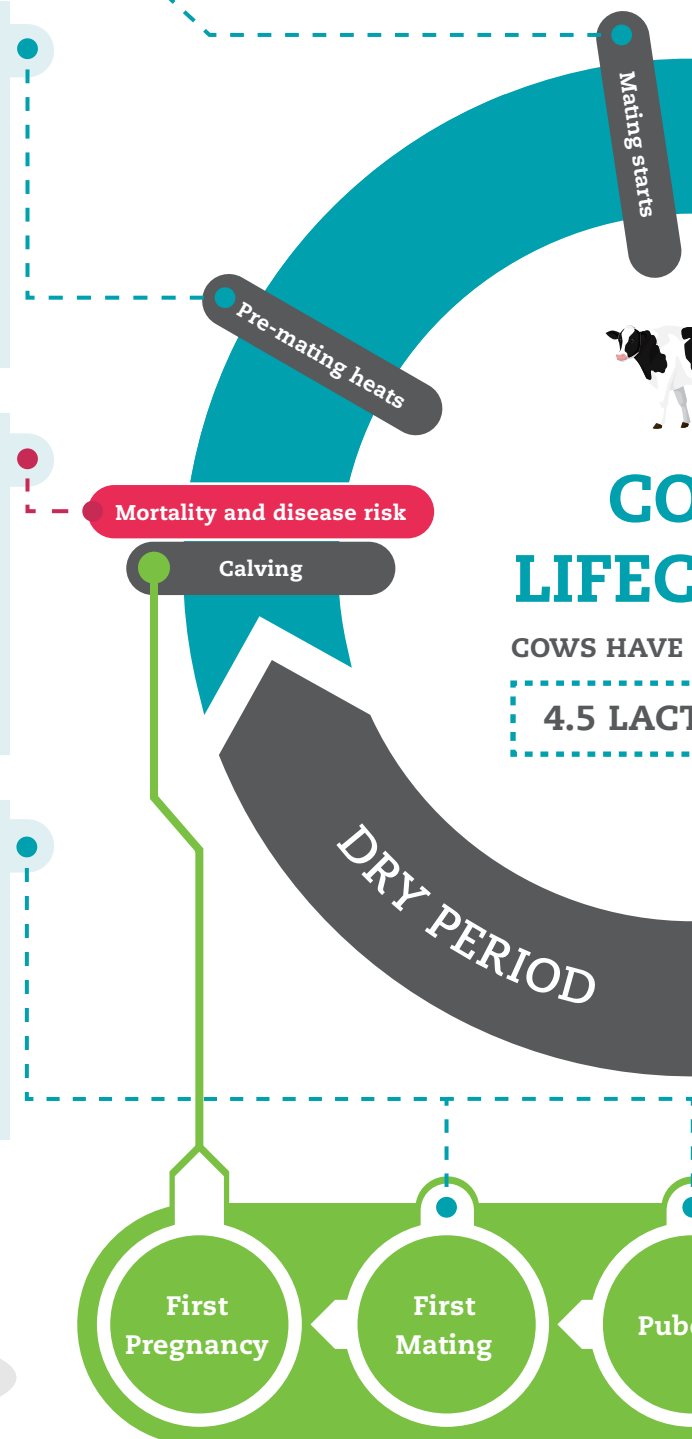
Our high Fertility BV heifers reached puberty 21 days earlier and 25kg lighter than the low Fertility BV heifers, despite growing at the same rate. They also had 9% higher 6-week in-calf rates.

A scale-up study using 5000 animals in 54 herds is underway. It will test if puberty onset and heifer reproductive measures are worthwhile traits for increasing genetic gain in fertility.



# Improving cow health and lifetime productivity

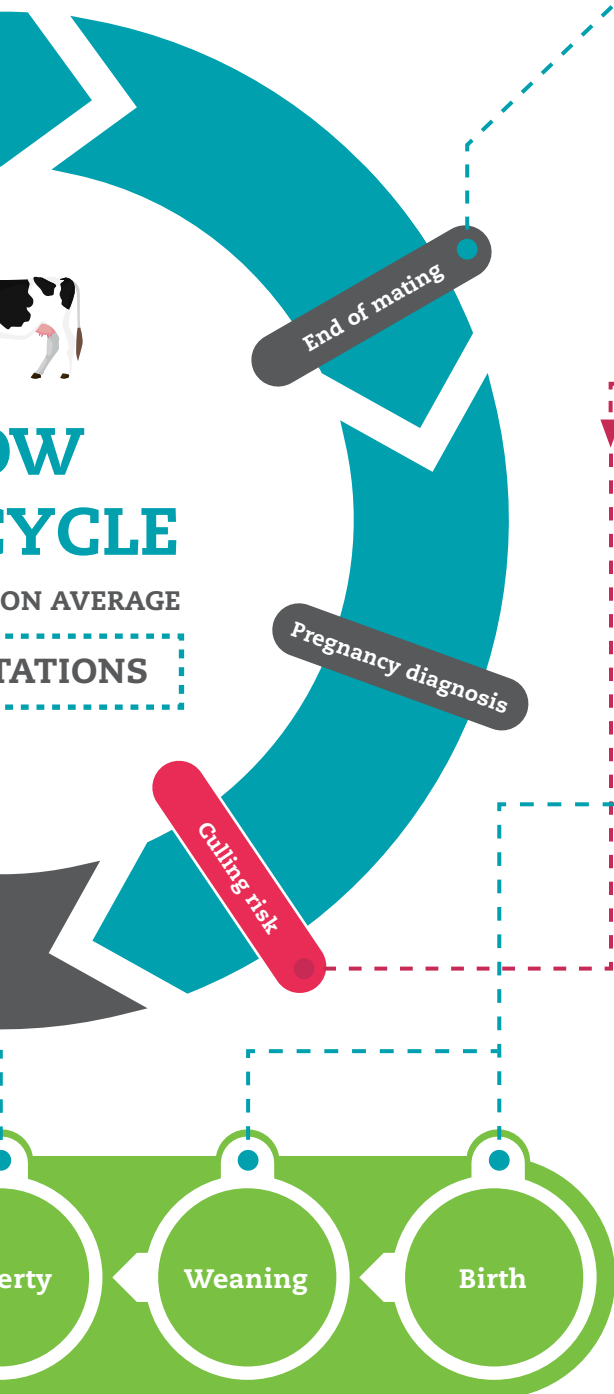
A major research programme is using genetic solutions to improve cow health and lifetime productivity. Check out some of the key findings:



CO  
LIFEC  
COWS HAVE  
4.5 LACT

# Cow fertility productivity

Investigating management and cow fertility, health and longevity. Key outcomes to date.



## Improving conception rates

Most pregnancy failures in NZ cows occur in the first week after AB:

- 79% of cows initially conceive; the remaining 15% have fertilisation failure, and 6% are not truly in heat.
- Conception rates reduce rapidly to 66% at seven days after breeding. Fewer embryo losses occur thereafter, with 58% of cows pregnant at 35 days, and 55% pregnant at 70 days.

Aiming for 88% of the herd calved within six weeks and meeting body condition score targets at calving and mating improves conception rates by increasing the number of oestrous cycles before mating.

## Key causes of cow removal

21% of cows are removed from the herd each year (16% culled, 2% died, 3.5% sold).

Most removals are involuntary or avoidable. Key reasons include:

- reproductive failure 37%
- udder health 11% and other health disorders 31%
- unknown 9%
- low production or poor conformation 12%.

## Better genetics for cow longevity

DairyNZ has developed a new 'functional survival' trait that uses removal reasons to select cows that are less likely to be culled for health issues.

It also uses TOP (traits other than production) to predict survival of cows at different ages, and accounts for removal reasons changing as cows get older.

We aim to have this new index available in Breeding Worth within 12 months.

## Calf survival rates

Our research indicates that 94% of births result in a live calf 'pick-up', with top operators achieving over 96%.

Deaths to weaning average 4% but range from 0 to 11% between farms.

Improved colostrum management and disease control will help reduce calf death rates towards the best practice target of 3% or less.

For more information go to [dairynz.co.nz/pillars](https://dairynz.co.nz/pillars)

*The Pillars of a New Dairy System programme is levy-funded, with matched co-funding from the Ministry of Business, Innovation and Employment (MBIE) and aligned core funding for fertility from AgResearch. Additional in-kind support is received from LIC, CRV, Ambreed and Fonterra.*

# Scaling back on antibiotics

Waikato farmers Brendon and Rochelle O’Leary talk about the responsible use of antibiotics – how they’re approaching the issue on their farm and how it’s been working.



Brendon and Rochelle O’Leary:  
“Antibiotic use impacts the whole food chain.”

Brendon and Rochelle have been on their 85ha farm in the peatlands of Gordonton for 25 years. They run a System 5 farm with a full autumn calving herd of 400 cows. Brendon has been involved with DairyNZ’s DCT (dry cow therapy) Decision-Making project, which has been underway for five years (see sidebar, next page).

In Brendon’s role of farmer representative for the project’s stakeholder group, it was his job to “consider how practices would be implemented on-farm – the pros and cons”, he explains.

## Why reduce antibiotic use?

“There’s momentum in the market around the world that we need to reduce antibiotic use in our dairy herds,” says Brendon. “We can’t ignore this – we’ve got to get on the bandwagon.

“Antibiotic use impacts the whole food chain – if we’re putting all these antibiotics into cows, how does that fit down the line with antibiotics no longer working to treat infections in humans and animals? The key is to start reducing antibiotic use at the source.”

Brendon’s thoughts were backed up by his vet, who said, ‘what use is an antibiotic up a teat canal if there are no bugs to kill?’

In the summer of 2017/18, Brendon took the leap to dry off using DCT for high-somatic cell count (SCC) cows, and teat sealant alone for low-SCC cows.

## First attempt and lessons learned

The first attempt at selective use of DCT didn’t go quite as Brendon had planned.

The dry-off period went well, with no cases of clinical mastitis. However, once calving began, there was a high incidence of mastitis. Economically, a lot more was spent on milking-cow antibiotics than what was saved at dry-off.

“We turned a lot of low-SCC cows into three-titters or high-SCC cows because our process wasn’t robust enough. It was really disappointing,” says Brendon.

“We realised that, when drying cows off, we needed to break their routine. Cows are creatures of habit, so after dry-off, we needed to stop bringing her to the feed pad, reduce her feed, and put her at the back of the farm so she doesn’t hear the cowshed going.”

## Back to blanket

Brendon’s confidence had taken a hit, so the next season, he and Rochelle reverted to whole-herd (blanket) DCT.

“A lot of things had gone backwards so we needed to ride that out.”



It was a good move for the farm, says Brendon.

"We've turned things around and corrected some of the mastitis issues we had. We're now in a position where we can move forward."

### Giving it another go

This time around, Brendon will be transitioning the cows better through dry-off, to support a new regime of selective DCT.

"I'm feeling confident going into this dry-off. As long as we follow the procedures, we should be more than right. Lowering the SCC threshold for cows that don't receive DCT gives me extra peace of mind."

Brendon's criteria for selecting animals to receive teat sealant alone is an SCC below 150,000 cells/ml for cows and below 120,000 cells/ml for heifers. Seventy-six percent of the herd will be eligible for teat sealant alone. The remaining 24 percent will receive a combination of DCT and teat sealant.

Finance isn't a driver, but their cost of doing selective DCT this year will be \$4600, which represents a \$2000 saving.



*Brendon discusses this year's dry-off strategy with DairyNZ's Jane Lacy-Hulbert, who leads the DCT Decision-Making project.*

### Keep moving forward

Brendon now has plans for a similar DCT strategy on his other farm, managed by his son Alex.

"Sooner or later we have to implement this, so it's better to get started early and get our strategies right and have confidence. Move ahead of the curve rather than be the last one to start."

"My advice for other farmers is to surround yourself with good advice from veterinarians. Should you do it, and to what degree? All farms are different."



Learn more about responsible use of antibiotics at [dairynz.co.nz/antibiotics](https://dairynz.co.nz/antibiotics)

### Brendon's dry-off plan this summer

- Dry off in small groups – 50 days before calving date.
- Separate the group seven to 10 days before dry-off.
- Reduce feed to reduce milk volume.
- Day of dry-off – give time to ensure things are done right with teat hygiene, product administration and teat spraying.
- When cows are let go from the shed, make sure they're not running down the race swinging their udder, moving the products out of the teat canal.
- Use good quality teat sealant.
- Hygiene at the teat end is crucial.



### Project outcomes

The DCT Decision-Making project's five-year investment by DairyNZ, supported for three years by the Ministry for Primary Industries' Sustainable Farming Fund (SFF), has been used to:

- survey farmers and vets to learn about their attitudes towards antibiotics and how they're using them on-farm
- assess mastitis prevalence at dry-off across 36 herds, evaluating the effects of specific interventions
- develop and promote science-based protocols that support less use of dry cow antibiotics on New Zealand dairy farms
- survey farmers annually to evaluate reduction in use of antibiotics at dry-off.

This work has been guided by a stakeholder steering group, of which Brendon was a key member. Chaired by Cole Groves (Grove Dairies, Ashburton), and involving farmers, vets and other stakeholders, the group has provided an influential forum to ensure workable solutions are introduced.

A collaborative effort: receiving the award for FRNL are (left to right) DairyNZ's David Chapman, AgResearch's Robyn Dynes, Lincoln University's Grant Edwards and Plant & Food Research's Mike Beare.



# Winning at nitrate reductions

## A DairyNZ-led research programme that's helping farmers reduce their nitrate leaching has picked up a major award.

The Forages for Reduced Nitrate Leaching (FRNL) programme has achieved strong results for farmers over the last six years – and a recent award is great recognition.

In December, the collaborative six-year programme won a Significant Achievement Award from the Canterbury Section of the New Zealand Institute of Agricultural and Horticultural Science.

"We're all extremely pleased to receive this award," says DairyNZ senior scientist Dr Ina Pinxterhuis, who led the FRNL programme.

"We're even more delighted to see that many farmers have been following the programme and have already adopted some of the lower nitrogen pastures, crops and practices into their farm systems."

More than 100 people, 10 commercial farms and several research organisations were involved in the programme, which ran from 2013 to 2019.

"Farms used a range of options, including low-protein feed crops such as fodder beet, and pasture species such as plantain and Italian ryegrass. They also planted catch crops to use up residual soil nitrogen through plant growth," says Ina.

Among the monitor farmers were Tony Coltman and Dana Carver, whose changes included introducing fodder beet, reducing fertiliser use and using plantain on their Dunsandel farm.

They were able to reduce their farm's nitrogen losses by 36 percent, while increasing their cow numbers by five percent.

"The results are giving us the confidence to start cutting back on nitrogen and changing the way we do things," says Tony.

Mayfield dairy farmers Grant and Jan Early were also part of the project.

"We now understand the surpluses that come from nitrogen fertiliser and nitrogen in supplements, and how we can change



FRNL monitor farmers Tony Coltman and Dana Carver.

those to make a difference," says Grant.

The options trialled through FRNL are now being applied by farmers in three regions – Canterbury, Manawatū and Southland – where DairyNZ is leading levy-funded projects to help farmers reduce their nitrogen losses.

"Farmers are keen to adopt new ideas which lead to better environmental outcomes and there's been a lot of interest in FRNL across New Zealand," says Ina.

With plantain, fodder beet and catch crops becoming much more widely used, FRNL has given farmers vital information on how to use the crops and their benefits.

FRNL scientists are now working with Overseer to update the model with the project's findings.

### i | About FRNL

Forages for Reduced Nitrate Leaching (FRNL) was a DairyNZ-led collaborative research programme across the primary sector, delivering science for better farming and environmental outcomes. The main funder was the Ministry of Business, Innovation and Employment, with co-funding from research partners DairyNZ (from its farmer levy), AgResearch, Plant & Food Research, Lincoln University, Foundation for Arable Research and Manaaki Whenua – Landcare Research. Learn more at [dairynz.co.nz/frnl](http://dairynz.co.nz/frnl)

# Sowing the seeds of success

Two New Zealand-based senior plant breeders tell us how DairyNZ’s levy-funded research is harnessing technology, enabling their companies to deliver better value to farmers.

PGG Wrightson Seeds’ Michael Norriss and Barenbrug Agriseeds’ Courtney Inch are enthusiastic about DairyNZ’s research and their companies’ contribution to DairyNZ partnership research projects. It’s a collaborative model that’s turning science into a ‘real world win’ for farmers through joint programmes, including Pastoral Genomics and the Forage Value Index.



## Pastoral Genomics – testing takes time

Both Michael and Courtney agree that the pace of technology and on-farm change calls for swift solutions. However, plant breeding is a long-term game, 10 to 15 years from start to end for a new cultivar.

“Breeding cultivars that meet farmers’ needs for plant productivity, quality and persistence – while maximising genetic gain – is complex and difficult,” notes Courtney. “We’re now testing the tools from Pastoral Genomics to make breeding easier.”

DairyNZ, Beef + Lamb NZ, AgResearch, Dairy Australia, Barenbrug Agriseeds, Grasslands Innovation (a PGW Seeds joint venture) and the Government are co-funders in the Pastoral Genomics programme, which has developed LIDAR and genomic selection tools that help breeders select better plants faster. (LIDAR is a laser that measures pasture biomass to determine growth.) Breeders in both companies are now using those tools.

Michael says: “Results and data from Pastoral Genomics so far have expanded our knowledge and show the potential to increase genetic gain in our pasture breeding programmes, while pasture measurement tools are already incorporated into our core work.”

He also says the challenges around plant breeding research mean companies like his “need to be hard-nosed about what we choose to focus on – it’s got to be something that will have long-term value.”

## FVI hitting the ground

The FVI (Forage Value Index) is a partnership between DairyNZ and the seed industry, through the New Zealand Plant Breeding & Research Association (NZPBRA).

Courtney says Barenbrug Agriseeds uses the FVI as a selection tool to help choose lines from their own breeding programme to take to market.

“We’re able to give our farmer clients more choice, improved performance, easier management and accessible independent cultivar information through the FVI.”

Michael says PGW Seeds’ salespeople take FVI rankings very seriously.

“I think the work put into the FVI is forward-thinking, and maybe the best or best equal in the world.”

**“I think the work put into the FVI is forward-thinking, and maybe the best or best equal in the world.”**

His company’s own breeding programmes also include DairyNZ’s FVI goals and weightings as a major component.

Through NZPBRA, the seed companies were involved in setting up the FVI’s agreed, consensus-based traits. Michael’s also keen to see more traits added as the FVI develops, for example, an environmental co-efficient.

## We’re all in this together

Courtney is impressed with how DairyNZ and other research organisations, New Zealand pasture breeding companies and global partners share the costs of this type of research without degrading the knowledge.

“From scientists, to the commercial companies like ours, to the on-farm support that comes from DairyNZ, it ensures that from lab to farm, the knowledge base is fully covered. It’s an effective way of making progress for farmers.”



For more information about the research mentioned above, visit [dairynz.co.nz/fvi](https://dairynz.co.nz/fvi) and [pastoralgenomics.com](https://pastoralgenomics.com)



# Farmers supporting farmers

If you could do with some help from another farmer, Dairy Connect can make that happen.

## What is Dairy Connect?

Dairy Connect is a free and confidential service facilitated by DairyNZ. It's a great way for farmers to connect with other farmers and get support on any topic.

We know that farmers understand other farmers' situations. That's why Dairy Connect was set up to help dairy farmers share their knowledge and experience where it's needed most.

## How can it help?

No topic is too big or small for Dairy Connect. From animals to pasture and feed, farm environment, people, and business, as well as topics like farm owner/sharemilker relationships, progression advice, and once-a-day milking – all topics are covered.

More than 400 support farmers around New Zealand are willing and waiting to give their time to help other farmers.

Go to [dairynz.co.nz/dairyconnect](http://dairynz.co.nz/dairyconnect), or email [dairy.connect@dairy.co.nz](mailto:dairy.connect@dairy.co.nz), or phone **0800 4 DairyNZ (0800 4 324 7969)** now to register for support or to become a support farmer.



"I found the Dairy Connect service extremely helpful and worthwhile to use. In fact, we wish we had used it sooner as our support farmer was full of great information and ideas and the knowledge they had was invaluable."

*Trudy Williams, contract milker, Bay of Plenty. Connection was on career progression and investment ideas.*



"I cannot speak highly enough of the Dairy Connect service and our support farmer. Our support farmer was straight to the point, full of information, and very helpful. After an on-farm visit we felt reassured and confident that we were on the right track with our decision to go once-a-day all year round."

*Simon Wither, farm owner, Wairarapa. Connection was on transitioning the farm to OAD all year round.*

### Top topics

1. Career progression
2. OAD milking year round
3. Contract disputes

### Top farmer types using Dairy Connect

1. Contract milker
2. Manager (herd, assistant and farm)
3. Sharemilker

### How long a connection takes

**7 DAYS**

(average time from registration to support farmer connection)

### Our support farmers

1. Farm owners (62%)
2. Sharemilkers (19.5%)
3. Equity managing partner (6.1%)
4. Contract milker (5.8%)
5. Farm manager (2.7%)
6. Equity director, farm assistant, lease, grazier (3.9%)

### Connections by region

- |                                   |                               |
|-----------------------------------|-------------------------------|
| 1. Canterbury/North Otago (29.3%) | 5. Northland (6.8%)           |
| 2. Waikato (26.5%)                | 6. Taranaki (6.1%)            |
| 3. Southland/South Otago (15.7%)  | 7. Lower North Island (4%)    |
| 4. Bay of Plenty (7.5%)           | 8. West Coast (3.4%)          |
|                                   | 9. Top of South Island (0.7%) |

# Is dilution the solution?



You may have heard that increasing production per cow or per hectare helps to dilute costs and increase profit. DairyNZ dairy systems specialist Mark Neal investigates whether it's true.



Most people using the dilution phrase are making one of three assumptions:

1. If you get more production per cow, you dilute the cow's maintenance needs – so it must be more profitable.
2. If you produce more milksolids (MS) per hectare, you dilute fixed costs – so it must be more profitable.
3. If you produce more MS per hectare, you dilute your debt per kilogram of MS – so you're better able to repay it.

## Does more production/cow increase profit?

For a cow at New Zealand's average MS production level (approx. 380kg MS), and average liveweight (approx. 455kg LW), about 45 percent of their energy intake goes to maintenance, walking and pregnancy requirements.

If the cow produced 20 percent more (approx. 455kg MS), it dilutes the share of energy in maintenance, and so only 40 percent of the energy is used for maintenance.

This seems like a win. However, the higher milk production can come from two places: higher pasture harvest or higher offered

supplement. Only one of these, pasture harvest, is consistently and positively associated with profit. Imported supplement adds feed cost and associated costs of feeding, leading to increased costs per kg of MS.

Supplements add to profit only with high standards of pasture management and cost control. Dilution of maintenance isn't enough to increase profit.

## Does more production/hectare dilute cost?

'Fixed costs' like electricity, repairs and farm maintenance can make up over 25 percent of a farm's expenses. It's easy to assume that increasing production dilutes these fixed costs, but really, they should be called overheads.

Published data shows that most overheads increase with intensification, particularly when that is driven by higher use of supplement. So, no win there, either.

## Does more production/hectare dilute debt?

Many farmers believe reducing debt per kilogram of MS, by increasing production, is helpful for debt servicing. However, careful thinking is needed here.

In particular, increasing production from supplement is associated with higher expenses per kilogram of MS, which means in lower milk price years, there may be less total profit available to pay interest obligations and principal.

**Myth** Increasing production per cow or per hectare profitably dilutes cows' maintenance needs, on-farm fixed costs and/or debt.

**BUSTED**



The path to profit has, effectively, nothing to do with dilution. There's a clearer relationship with profit from greater pasture harvest, cost control and careful decisions around capital investment.

## Picking her dry-off date on BCS

To ensure your cows hit their body condition score targets and perform strongly next season, now's the time to think about selecting the right dry-off dates.



There's a strong link between individual cow body condition score (BCS) and herd reproductive performance. Cows that calve too thin (less than BCS 5.0 for mature cows, and less than 5.5 for first- and second-calvers), generally take longer to start cycling after calving. This can reduce submission rates and conception rates, negatively affecting 6-week in-calf rates and not-in-calf rates.

### Hitting BCS targets

Aim to have less than 15 percent of your herd above target, and less than 15 percent below. To meet targets at calving, consider each cow's BCS and calving date when you're determining her management through late lactation and dry-off date. Once-a-day (OAD) milking and preferential feeding can help increase BCS gain in late lactation; however, the most effective way to gain BCS is to dry off cows and feed them appropriately.

### How to choose dry-off dates

Picking a cow's dry-off date depends on the amount of BCS she must gain to achieve target at calving; her predicted calving date; the amount and type of feed she'll be offered during the dry period; and for some cows, her milk volume and quality and her contribution to the bulk tank somatic cell count. Avoid chasing the small volumes being produced late in this lactation at the expense of next lactation's performance.

Remember to consider what feed is available, including pasture cover and the quantity and quality of crops and supplements.

Also consider the amount and type of feed a dry cow can consume on a daily basis, and the amount of BCS she can gain each month (a sensible amount is usually 0.5 BCS unit/month). Cows often gain no BCS in the first seven to 10 days of the dry period and gain very little in the month prior to calving. That means there are about 30 to 40 days during the dry period where cows gain no BCS.

With early-aged pregnancy testing information, we have an accurate predicted calving date to work backwards from when determining her appropriate dry-off date.

Calculations to determine dry-off dates are provided in the table below or use the DairyNZ dry-off-date calculator ([dairynz.co.nz/bcs-strategies](http://dairynz.co.nz/bcs-strategies)). Note: for the mammary gland to 'reset' itself, all cows, even if they're at target BCS, should have a dry period of at least 42 days.

### Key points

1. Achieving BCS targets at calving is important for future performance.
2. Take action mid- to late lactation to help cows hit BCS targets at calving.
3. Use all information available to determine suitable dry-off dates for individual cows and view dry-off as a gradual reduction of the milking herd.

### Days required from drying off until calving to achieve target calving BCS

Body condition score	Cow	3.0	3.5	4.0	4.5
Rising 3-year old		3.5	4.0	4.5	5.0
Days cows need to be dry before calving	Autumn pasture only	160	130	100	70
	Autumn pasture and high quality supplement	120	100	80	60

Includes 10 days when cows are being dried off and not gaining condition and 30 days when cows do not gain condition before calving.

## Growing the tree count

The Vision is Clear's 'Tree-warding' virtual forest has been growing beautifully.

More than 1200 native trees have been donated by Kiwis so far. They'll soon be planted by conservation charity Trees That Count, to help protect New Zealand's waterways.

If you've been planting native trees on your farm, you can add them to the nationwide count. By doing so, you'll be helping demonstrate the commitment you're already making to protecting waterways as a planter.

Best of all, once you've done that, you can apply to Trees That Count for free native trees to keep planting – visit

[treesthatcount.co.nz/planters](http://treesthatcount.co.nz/planters)



## Heat stress and your bottom line

The potential financial impact of heat stress in cows due to increasingly warmer summers was highlighted recently in an award-winning Waikato Science Fair project.

Fourteen-year-old Grace Wisnewski analysed 13 years' data from a Ruakura NIWA weather station. She applied DairyNZ's formula for Temperature Humidity Index (THI) to this data to determine when heat stress would start to affect milksolids production. She used a threshold for THI of 68, which is relevant for Holstein-Friesian cows.

She found that the number of days hot enough (i.e. where THI had exceeded 68 and reduced milk production) had increased by 3.5 days per year from 2006 to 2018, increasing the potential loss of income for a typical Waikato farm by about \$1000 each year.

She based this on an average-sized Waikato dairy herd of 350 cows, and an estimated milk price of \$6.90/kg MS.

Grace Wisnewski from St Peters School, Cambridge, checks out cows at Owl Farm.



## Plan to manage dry summer

It's been a dry start to the year in many New Zealand regions, with rainfall in short supply and growing conditions becoming more challenging for farmers.

DairyNZ's strategy and investment leader Dr Bruce Thorrold says it's important to use supplements wisely, manage heat stress for cow comfort, and take care of your team.

"Ongoing dry weather can be stressful. Planning ahead for how you will respond if the dry conditions continue will allow you to consider your options and feel confident you have a plan in place," says Bruce.

Bruce advises farmers to visit [dairynz.co.nz/summer](http://dairynz.co.nz/summer) for information on how to manage in dry conditions. DairyNZ consulting officers are also available to offer advice – phone 0800 4324 7969.



# Forums focus on what's ahead

Five DairyNZ Farmers' Forum events in February and March will provide insights and answers to some of the big issues farmers will face in the future. Check out speakers and topics below.



Each regional forum – in Northland, Waikato, Taranaki, Canterbury and Southland – will provide farmers with clarity and direction as they head into the next decade.

DairyNZ chief executive Dr Tim Mackle says this year's events (funded by the DairyNZ Levy) are a valuable opportunity to discuss the drivers of change and what farmers can do to respond.

"The day-to-day running of a multi-million-dollar business can make it hard to step back and take a look at the wider dairy sector, potential changes affecting it and resulting challenges.

"The DairyNZ Farmers' Forum has been created with this in mind – giving dairy farmers easy access to experts who will discuss how we can retain our competitive edge as a sector, as well as providing updates on the latest research into on-farm solutions.

"Adapting to change has always been a strength of the dairy industry – and long may it be so. This is an opportunity to gain knowledge and insights to help farmers reach their short- and long-term goals."

## Guest Speakers

### Cameron Bagrie – economist

#### Understanding opportunity, managing risk (all five events)

Learn what's driving change in global markets. Hear the latest on the commodity market and the power of the consumer in influencing our future. Cameron will also take a look at worldwide environmental constraints and how population growth and new technologies will influence our food.



### Nadia Lim – celebrity chef

#### Fit for the future (Waikato, Taranaki, Canterbury, Southland events)

Learn about the value of 'nude food', where Nadia thinks the future of food is heading, and why agriculture will continue to play an important role. She'll also share some of her business experiences and how she learned to adapt to change. Nadia recently moved from Auckland to Central Otago with her children and husband to take over the reins of his family's sheep station.



## Other topics

- **Telling the dairy story** – learn how to engage with the public, to build trust and prevent misconceptions.
- **Policy and advocacy** – what’s happening behind the scenes in regional and national policy development? And how can you influence outcomes and prepare for what’s coming?
- **Science in action** – learn about the science in your region and how you might apply solutions on-farm.
- **Practical steps to reduce our footprint** – hear tips from local farmers about how they’ve reduced their environmental footprint.
- **Clearing the fog** – what’s changing in our sector and why?
- **Changes on the horizon** – how are DairyNZ and the wider sector responding to change? What are the priorities?

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The Farmers’ Forum events are free for DairyNZ Levy payers and their staff. Topics vary depending on region. For more information and to register, visit [dairynz.co.nz/farmersforum](http://dairynz.co.nz/farmersforum)



## Regional research showcase

The Waikato, Taranaki, Canterbury and Southland events (each running from 10 a.m. to 3.30 p.m.) will be held on research farms. The Northland event (10 a.m. to 2 p.m.) will be held in partnership with the Northland Dairy Development Trust, which helps manage dairy research in the region.

### Northland – Tuesday, February 18

Run in partnership with Northland Dairy Development Trust

#### The supplement trial and fertiliser trial

What are the effects on production, environmental outcomes and profitability when reducing the reliance on imported supplementary feed from a pasture-based system?

The Northland Agricultural Research Farm’s data compares three 28ha pasture-based systems, differing in stocking rate and the amount of imported feed.

### Waikato – Wednesday, February 19

Hosted by DairyNZ’s Lye Farm, Newstead

#### Farming in the future – have we got N leaching and greenhouse gas emissions covered?

What solutions help farmers meet environmental obligations? Get the latest research on reducing nitrogen leaching and greenhouse gas emissions and find out what the key drivers are for reducing leaching and emissions on-farm. Also, learn about what you can do next season and how to fit this into your system.

### Southland – Tuesday, March 3

Hosted by Southern Dairy Hub, Invercargill

#### Wintering practices

What are the recommendations from the Winter Grazing Taskforce and how are farmers able to adapt to the proposed changes? Hear about trial work behind fodder beet and kale crops, as well as infrastructure options for wintering cows in Southland.

### Taranaki – Wednesday, March 11

Hosted by Dairy Trust Taranaki’s Gibson Farm, Hawera

#### Transition to autumn calving

Find out results from the trial so far at Dairy Trust Taranaki’s Kavanagh Farm. This trial is investigating what happens when the whole herd is transitioned at once from spring to autumn calving. Effects on milk production, days-in-milk, 6-week in-calf rate, liveweight, body condition score, pasture growth and supplementary feed will be discussed.

### Canterbury – Thursday, March 12

Hosted by Ashley Dene Research and Development Station, Lincoln University

#### Variable milking intervals

Want to spend less time in the shed but once-a-day doesn’t suit your system? Find out initial results from a trial of variable milking intervals across different times of the year, and find out how it might suit your farm system.

## February events

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
					1	2
3	<b>04 BAY OF PLENTY</b> Kaharoa/Mamaku Discussion Group - 11 a.m. to 1 p.m. at Chris Haworth's and Chris Steven's Kaharoa farm. Lunch provided. Details from Kevin McKinley on 027 288 8238.			<b>07 SOUTHLAND/SOUTH OTAGO</b> Browns South Hillend Discussion Group meets at Craig McGregor's Dipton farm between 10.30 a.m. and 1 p.m. Phone Nicole Hammond for details on 021 240 8529.		
10						
<b>TARANAKI</b> The Mangatoki/Te Roti Discussion Group meets at David White's farm, Lower Hunter Road, between 10.45 a.m. and 1.30 p.m. Call Mark Laurence, 027 704 5562 for more information.		<b>19</b>	20	21	22	23
24	25	<b>26 WAIKATO</b> Bruce Evers from DairyNZ's Early Response Service speaks at the combined Otorohanga South and Kio Kio Body Condition Scoring Rally between 11 a.m. and 1 p.m. Details from Denise Knop, phone 027 513 7201.				

FOR A FULL LIST OF WHAT'S HAPPENING THIS MONTH, VISIT [DAIRYNZ.CO.NZ/EVENTS](https://dairynz.co.nz/events)

### NORTHLAND

Run with and hosted by the Northland Dairy Development Trust (NDDT) in Whangarei, the DairyNZ Farmers' Forum is returning to Northland on February 18.

Get the latest updates on science in your region, including the NDDT supplement trial and fertiliser trial. Hear from experts on the effects on production, environmental outcomes and profitability when removing imported supplementary feed from a pasture-based system. The study at the Northland Agricultural Research Farm compares three 28ha pasture-based systems, differing in stocking rate and the amount of imported feed.

Visit [dairynz.co.nz/farmersforum](https://dairynz.co.nz/farmersforum) to find out more and register.

### BAY OF PLENTY

Keen to know what's happening in the Bay of Plenty? Make sure you've subscribed to all of our emails, including monthly regional updates, discussion group and event details, and weekly monitor farm updates.

Our monthly regional newsletter covers local events and national items of importance. We also have an events email that summarises what's coming up, with links to venue details. The Bay of Plenty monitor farms email summarises data and current farm conditions from four farms across the region.

Go to [dairynz.co.nz/subscriptions](https://dairynz.co.nz/subscriptions) to opt in.

### WAIKATO

Future, food and science solutions are the themes of the upcoming DairyNZ Farmers' Forum at Lye Farm near Hamilton on February 19.

Waikato's regional science focuses include 'have we got N leaching and greenhouse gas emissions covered?' and 'what solutions help farmers meet environmental obligations?'

This workshop will update farmers on the latest research in relation to these questions, as well as look at what farmers can do next season and that will fit into their systems.

Guest speakers at the event include economist Cameron Bagrie and chef Nadia Lim. Find out more and register at [dairynz.co.nz/farmersforum](https://dairynz.co.nz/farmersforum)

### TARANAKI

Guest speakers Cameron Bagrie and Nadia Lim will appear at the DairyNZ Farmers' Forum in Hawera on March 11. This event will set the tone for the future of dairy farming in the region.

Hosted by Dairy Trust Taranaki's Gibson Farm, the event will focus on autumn calving, featuring results from the trial to date at Dairy Trust Taranaki's Kavanagh Farm.

Provisional results will be presented, showing differences in days in milk, empty rates, liveweight, overall production as well as the differences in feeding/required supplement compared with the Spring Calving farmlet.

Register now at [dairynz.co.nz/farmersforum](https://dairynz.co.nz/farmersforum)

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Far North	Amy Weston	027 807 9686
Lower Northland	Hamish Matthews	021 242 5719
Whangarei West	Ryan Baxter	021 809 569

#### Waikato

Regional Leader	Wilma Foster	027 246 2147
South Auckland	Mike Bramley	027 486 4344
Hauraki Plains/Coromandel	Jaimee Morgan	021 245 8055
Te Aroha/Waihi	Euan Lock	027 293 4401
Cambridge/Hamilton	Lizzy Moore	021 242 2127
Huntly/Tatuanui	Brigitte Ravera	027 288 1244
Matamata/Kereone	Frank Portegys	027 807 9685
Pirongia	Steve Canton	027 475 0918
Otorohanga/King Country	Denise Knop	027 513 7201
Arapuni	Kirsty Dickens	027 483 2205

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Eastern Bay of Plenty	Andrew Reid	027 292 3682
Central Bay of Plenty	Kevin McKinley	027 288 8238

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#### Taranaki

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South Taranaki	Nathan Clough	021 246 5663
Central Taranaki	Emma Hawley	021 276 5832
Coastal Taranaki	Caroline Benson	027 210 2137
North Taranaki	Ian Burmeister	027 593 4122

#### Lower North Island

Horowhenua/Coastal and Southern Manawatu	Kate Stewart	027 702 3760
Wairarapa/Tararua	Rob Brazendale	021 683 139
Eketahuna	Andrew Hull	027 298 7260
Hawke's Bay	Gray Beagley	021 286 4346
Northern Manawatu/Wanganui/Woodville	Rob Brazendale	021 683 139
Central Manawatu/Rangitikei	Charlotte Grayling	027 355 3764

### South Island – Head: Tony Finch 027 706 6183

#### 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	Ross Bishop	027 563 1785
North Canterbury	Amy Chamberlain	027 243 0943
Central Canterbury	Ross Bishop	027 563 1785
Mid Canterbury	Stuart Moorhouse	027 513 7200
South Canterbury	Heather Donaldson	027 593 4124
North Otago	Alana Hall	027 290 5988

#### Southland/South Otago

Regional Leader	Ollie Knowles	027 226 4420
West Otago/Gore	Ollie Knowles	027 226 4420
South Otago	Guy Michaels	021 302 034
Central/Northern Southland	Nicole E Hammond	021 240 8529
Eastern Southland	Nathan Nelson	021 225 6931
Western/Central Southland	Leo Pekar	027 211 1389

## DairyNZ directors

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Jo Coughlan	021 522 142
Tracy Brown	027 291 1716

Or send an email to: [chair@dairynz.co.nz](mailto:chair@dairynz.co.nz) or [director@dairynz.co.nz](mailto:director@dairynz.co.nz)

### LOWER NORTH ISLAND

Andrew Hull has recently joined the Lower North Island team as consulting officer for the Tararua region. Born and raised on a dairy farm in the Wairarapa, with four generations of dairy farmers before him, Andrew has been a part of the sector his whole life.

After graduating from Lincoln University with a Bachelor of Commerce (Agriculture) in 2018, Andrew spent a season playing rugby in the Netherlands. There, he took the chance to see inside their dairy industry with some work on-farm and with Fonterra, before returning home to his new role at DairyNZ.

Check out [dairynz.co.nz/co](http://dairynz.co.nz/co) to see our full team.

### TOP OF SOUTH ISLAND/WEST COAST

West Coast farmers face a unique set of challenges, which is why DairyNZ is bringing Mark and Measure to Westland suppliers.

Running in Hokitika from June 30 to July 2, this course will help you develop a 10-year financial plan that aligns with Westland's 10-year guaranteed milk price. Plan, create and achieve clarity and direction for business and personal success.

There are just 20 places available, so book your spot now at [dairynz.co.nz/markandmeasure](http://dairynz.co.nz/markandmeasure)

### CANTERBURY/NORTH OTAGO

Are you a good boss? Want to take your farm team to the next level? Then book your spot at the DairyNZ People Expo in Dunsandel on February 19.

You'll be part of the discussion at three interactive workshops run by New Zealand experts and leading farmers. Walk away with practical advice, tips and tools that will immediately add value to your business and help improve your working environment.

Find out more or register at [dairynz.co.nz/events](http://dairynz.co.nz/events)

### SOUTHLAND/SOUTH OTAGO

Keen to learn practical ways to build your farm team's independence, efficiency and cohesion – and create a better work environment? Register now for the DairyNZ People Expo in Invercargill on February 18.

The event features three interactive workshops:

- Learn future-focused and practical ways to build independence from our New Workplace Design project.
- Improve your time budgeting to gain efficiencies with People Mad's Sarah Watson.
- Take away ideas to create your own team culture on-farm from the Ministry of Business, Innovation and Employment and Shireen Chua of Third Culture Solutions.

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

**FARMING**  
THE **FUTURE** WITH  
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*DairyNZ*  
**Farmers'**  
2020 **forum**

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FUTURE HOLD FOR  
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Find out at your regional  
Farmers' Forum

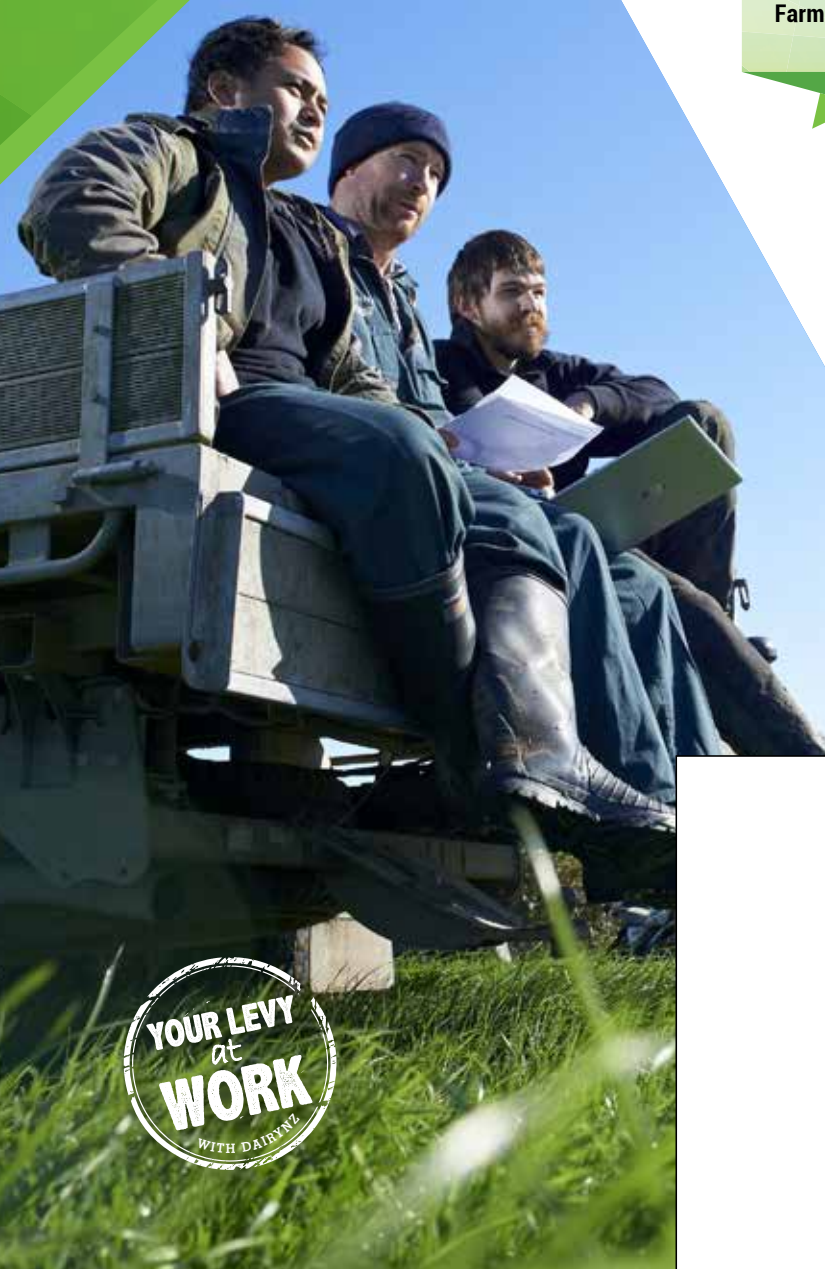
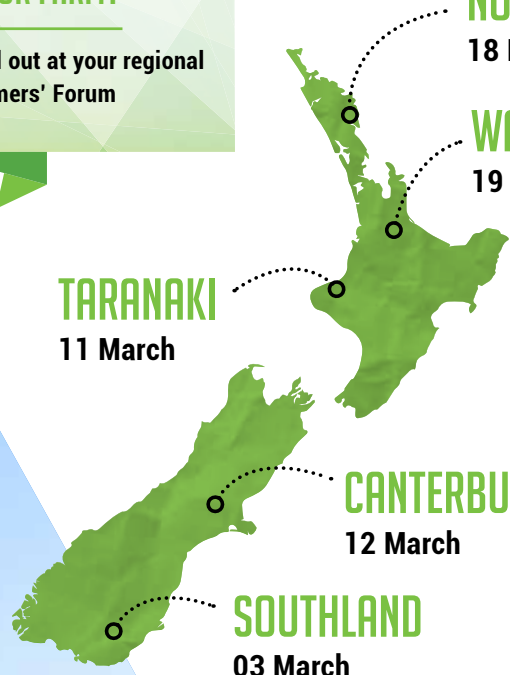
**NORTHLAND**  
18 February

**WAIKATO**  
19 February

**TARANAKI**  
11 March

**CANTERBURY**  
12 March

**SOUTHLAND**  
03 March



New Zealand  
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Sender: DairyNZ, Private Bag 3221, Hamilton 3240, NZ

**REGISTER ONLINE: [dairynz.co.nz/farmersforum](http://dairynz.co.nz/farmersforum)**