Inside Dairy

NOV-JAN 2026

By DairyNZ

Leading the way to resilient pastures

Farmers driving the change

Features:

Over the fence...

At the front of mind for farmers, communities and the wider dairy sector is sustainability. The question many have is "how can we balance profitability, environmental care and community expectations?"

That's a question we care about at DairyNZ, so it is great that this edition of Inside Dairy highlights some of the work underway in this space, to help ensure the sector continues to have a bright future.

The cover story is on our Resilient Pastures programme, which looks to identify pasture species that are more resilient to climate and weather events, to help improve pasture productivity. This work will help underpin sustainable farming systems in a changing climate.

You can also read about how sustainability is at the heart of everything Brendan Attrill does (page 6). His story highlights how continuous improvement can deliver benefits for farmers, animals and the environment, which makes it clear why he was announced as the 2025 National Ambassador for Sustainable Farming and Growing at the BFEA national awards, earlier this year.

These stories are only a drop in the ocean as to the work our farmers, and our team at DairyNZ, are working on to support the long-term success of the sector.

We know that underpinning all of this is science, which is why we've strengthened our leadership team in this area, with Dr Jenny Jago appointed as Science Partnerships and Impact Advisor, and Dr David Burger as Chief Science and Innovation Officer. Their expertise will help ensure DairyNZ's science remains farmer-focused and impactful.

I'd also like to acknowledge our directors Tracy Brown and Chris Lewis, who have both been re-appointed unopposed to the DairyNZ Board. I look forward to their continued contribution as we work alongside farmers on the challenges and opportunities ahead.

As always, your feedback is welcome at **Campbell.Parker@ceo.dairynz.co.nz**

Ngā mihi,

Campbell Parker
DairyNZ chief executive

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On the cover:
Te Maire farmers Allister and Kieran McCahon, read their story on page 14.

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Come to DairyNZ's research farm tour and Annual Meeting

We are excited to give our levy payers the opportunity to tour DairyNZ's purpose-built research farms, at Scott and Lye farms in Waikato, from 10am on Thursday, 6 November.

You will hear firsthand about some of the research DairyNZ is currently conducting, including viewing our individual animal intake infrastructure and facilities, where we carry out detailed animal and methane emissions research.

Following the research farm tour, DairyNZ's Annual Meeting will be held at Zenders Café, Hamilton, on Thursday, 6 November at 1:15pm. Lunch will be available from 12:30pm, before the Annual Meeting begins.

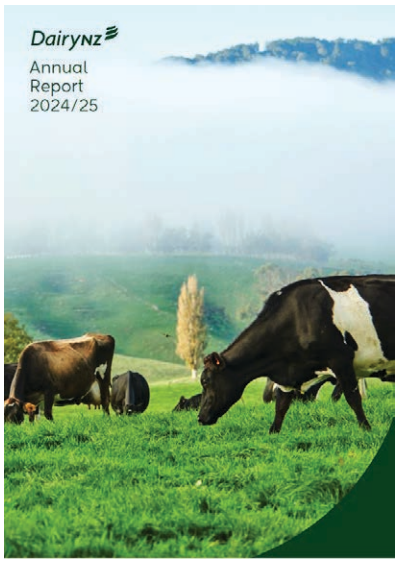
There will also be the opportunity to engage with other farmers, DairyNZ Board members and our senior leadership team. We look forward to seeing you there.

Find out more at **dairynz.co.nz/elections** and register online now.

DairyNZ Annual Report 2024/25: Turning science into solutions

DairyNZ has released its latest Annual Report, highlighting a year of growth, resilience and partnership.

The 2024/25 report reflects some of the feedback we've heard from farmers who want to know more about what DairyNZ does and how their levy is spent.



Inside the report are stories about the latest science and research projects, what we're doing to help farmers on-farm, and the financial outlook for DairyNZ now and into the future.

It is all part of our vision to make the levy the best investment for every New Zealand dairy farmer.

DairyNZ levy payers received a copy of the annual report in voting packs that were sent out in early October.

You can also read the report online at **dairynz.co.nz/resources**

Exciting new micro-credentials available for farmers in 2026

Dairy Training Limited continues to develop new micro-credentials for all levels of the farm team on New Zealand dairy farms. BizStart and BizGrow have received NZQA approval; Fundamentals for Feed and Pasture Management and Fundamentals of Animal Health and Stockmanship (for new entrant staff) have been submitted for approval; and Reduce Your Farm Footprint and Improving Dairy Farm Workplace Efficiency are in the development phase. All are planned for delivery in 2026.

Visit **dairytraining.co.nz/courses** for the latest information about upcoming courses.

Join us for the 4th International Precision Dairy Farming Conference in Christchurch

3-5 December 2025

Are you a dairy farm owner, manager or decision maker? Are you looking to take your farm to the next level? Then this conference is for you!

Explore emerging technologies that address on-farm and sector challenges. Connect with farmers, advisors, researchers and technology developers from around the globe. Find out what is happening in other countries in this space. The event includes farm visits showing precision technologies in action, over 120 talks, world-leading precision dairy experts, and a farmer panel. Topics include animal monitoring, sensor technology, data use, pasture management, reproduction, animal health, labour efficiency, on-farm adoption and more.

Register now **precisiondairyfarmingconference.nz/registration**

DairyNZ project explores artificial intelligence opportunities

With the use cases of artificial intelligence (AI) advancing rapidly, farmer interest is growing in how it could be applied on dairy farms.

DairyNZ, in partnership with Perrin Ag, is exploring how farmers are already using AI and where the technology could add value over the next 3-5 years. Early findings show growing uptake of AI-powered pasture management and herd monitoring tools, and we're also beginning to see on-farm adoption of generative AI tools such as ChatGPT, Claude and Gemini to answer questions, speed up or improve tasks and support decision-making.

While AI won't replace farmers' knowledge, intuition and experience, it has the potential to complement them – providing deeper insights, supporting decision-making, and helping to optimise farm operations.

Findings from the project will be shared at the 4th International Precision Dairy Farming conference and in DairyNZ's Talking Dairy podcast.

Are you using AI on-farm? We want to hear more about your experiences.

The Milksolids Levy

VOTE

2026

Your opportunity to continue building a stronger future for dairy farming in New Zealand.

What is the Milksolids Levy?

The milksolids levy is a collective farmer investment that gives DairyNZ the ability to fund research, extension, and advocacy that benefits the whole sector.

It's how we work together on the big challenges – so dairy farmers can stay profitable, sustainable, and globally competitive.

Since the levy began, farmers' collective investment has made possible independent science, practical tools, and on-farm solutions that have supported you on farm and your community.

Why Vote?

Because the work we do on your behalf only continues with farmer support

Your vote decides whether the levy keeps funding:

- Research that delivers real on-farm solutions
- Tools and resources to improve farm performance
- A strong, independent dairy voice in policy advocacy

When you vote, you're shaping the future of your sector – and ensuring progress stays farmer-led.

Be ready to vote

Voting is open from Monday, 16 February to Friday, 13 March 2026.

How to Vote

You'll be able to cast your vote:

- Online
- By post

Detailed instructions will be sent to all levy payers in early 2026.

Who can vote

All dairy farmers who are responsible for paying the Milksolids levy during the election period.

Find out how your levy is invested:
dairynz.co.nz/levy

DairyNZ

One BW, one reliable metric

Major dairy sector players are leading the way in developing a single, independent Breeding Worth (BW) aligned with the National Breeding Objective and incorporating genomic information.

Genetic gain has long driven productivity on New Zealand dairy farms, contributing around half of all improvements. But in 2023, the Industry Working Group (IWG) formed to evaluate the current state of genetic improvement in the New Zealand dairy sector, found the rate of genetic gain in the national herd was lagging behind other advanced dairy sectors, and recommended changes to strengthen the genetic evaluation system.

For farmers, one of the biggest frustrations has been inconsistent assessments of animals' genetic merit between companies, making it harder to compare sires and creating uncertainty in breeding decisions. These discrepancies mean farmers may not be capturing the full value of genetic gain.

In response, DairyNZ, NZ Animal Evaluation, Livestock Improvement Corporation (LIC) and CRV are working through the Future Focused Animal Evaluation (FFAE) work programme. They have formed a governance group, chaired by West Coast dairy farmer Rebecca Keoghan, to guide improvements for farmers and the sector.

A major project of the work programme is OneBW, which brings genomic and non-genomic evaluations together into a single, trusted BW index. This will be independently verified to provide farmers confidence in its accuracy and published by all parties.

"Farmers make breeding decisions every year that have a lasting impact on their herds and businesses," NZ Animal Evaluation general manager Andrew Fear explains.

Farmers and breeding companies are working together through OneBW to provide a consistent, trusted Breeding Worth index for New Zealand herds.

"With OneBW, the goal is to give them a single, trusted index that's clear, consistent, and built for New Zealand's system. That consistency is important for farmer confidence and for capturing the full value of genetic gain."

The need for consistency is something the wider sector also values, says LIC chief scientist Richard Spelman.

"Genomics has been around for nearly 20 years. We've spent years refining how to make it work, and now we've reached an outcome that allows breeding companies to continue investing in their programmes while giving farmers a single, independent index to guide their breeding decisions."

CRV managing director James Smallwood explains that while technical challenges remain, OneBW is an important step toward a consistent, trusted BW that farmers can rely on. "It will help them make more informed breeding decisions and support progress in genetic gain across New Zealand herds."

Find updates about the FFAE Governance Group's work at **dairynz.co.nz/ffae**

Science leadership strengthened with new executive appointment

Dr Jenny Jago has been appointed to a newly created leadership team role – Science Partnerships & Impact Advisor – as part of a strategic refresh of DairyNZ's science leadership.

Dr Jago will play a key role in shaping DairyNZ's science direction, supporting strategic partnerships, and ensuring research continues to deliver meaningful, on-the-ground impact for dairy farmers. She brings deep expertise in science, change leadership, and adoption, along with strong relationships across both national and international science communities.

"This new role reinforces our commitment to world-class science that delivers value to farmers," said Campbell Parker, DairyNZ Chief Executive. "Jenny's appointment, alongside the recent addition of Dr David Burger as Chief Science and Innovation Officer, ensures we have strong leadership in place to navigate changes in the science system and foster impactful collaboration."

> ***These changes mark an exciting new chapter for DairyNZ's science and innovation programme.***

New chapter for science and innovation: Dr Jenny Jago has been appointed to the newly created role of science partnerships & impact advisor.

Dr Jago will be responsible for driving cross-sector partnerships, seeking external investment opportunities, overseeing the DairyNZ Independent Science Panel, and championing initiatives that connect research with on-farm outcomes. The role also includes monitoring global extension and delivery trends to inform impactful research and development.

Her appointment follows the transition of Dr Bruce Thorrold, DairyNZ's long-serving Chief Science Advisor, who stepped down from the Executive Team at the end of August. Bruce will continue to support DairyNZ as a part-time Strategic Consultant.

"Bruce has made an enormous contribution to DairyNZ and the wider agricultural sector over many years," said Parker.

"We are fortunate to continue drawing on his knowledge and expertise as he supports several key projects, including our Low N/Plantain and Resilient Dairy programmes, levy investment work, and key initiatives through NZ Animal Evaluation."

"These changes mark an exciting new chapter for DairyNZ's science and innovation programme. With Jenny and David in complementary leadership roles, and Bruce continuing to contribute in a strategic capacity, we are well positioned to lead science that delivers real results for New Zealand dairy."

Reducing cow numbers and responding to pasture signals has helped Brendan improve production per cow.

‘Profitable and sustainable’ makes for a winning approach

Brendan Attrill works on the health of interpersonal relationships, biodiversity and climate responses on his award-winning Taranaki farm.

Sustainability is at the heart of everything Brendan Attrill does.

It goes beyond improving environmental targets to include striving for better interpersonal relationships, enhancing biodiversity, and meeting climate targets on his award-winning farm at Huinga in Taranaki.

Brendan’s approach saw him named as 2025 National Ambassador for Sustainable Farming and Growing at the Ballance Farm Environment Awards (BFEA) earlier this year.

He is the third generation on the farm, where he milks 350 cows with his wife, Susan Mundt. He describes their approach to farming as holistic, balancing environmental stewardship and profitability.

At the heart of it all is their environmental farm plan. It outlines their environmental goals, projects in progress, and human resource (HR) guidelines for treating staff to ensure they’re an employer of choice.

“Our farm plan is a crucial part of what we do, and it’s a living document,” Brendan explains.

“We look at it often and it’s in the centre of our decision-making.”

Brendan also loves working with young people and watching them progress through the sector.

It’s a philosophy that has ensured they have never had a problem attracting good people, he says.

“We just want our farm to be a cool place to work.”

Alongside sustainability, Brendan wants the farm to remain relevant and strong, ready for the future if his son Conor ever decides to take the reins.

“There’s no pressure on Conor to come home. But if he wants to, we need to ensure the farm is set up for the future.”

> ***“We may own the farm, but in reality we are caretakers. If we want it to remain viable for future generations, we need to make sure it’s sustainable across all key areas.***

Being the third generation on the farm has shaped Brendan’s approach.

“I was lucky to have very supportive parents and grandparents – my grandfather was a great farmer.

“We may own the farm, but in reality we are caretakers. If we want it to remain viable for future generations, we need to make sure it’s sustainable across all key areas, from cows and pastures to animal welfare and biodiversity.”

Brendan has been on the farm for 24 years and says his journey to where he is today began several years into farming the property, when he realised the high stocking rate and tight residual system he had at the time were unsuitable.

He and Susan examined all their farm systems – cow production, pasture management, feed utilisation – and re-shaped their business.

Guiding their decisions was Professor Colin Holmes, who kept the idea of profitable milk from pasture front of mind.

Brendan paid close attention to the cows, pasture and soils, and adjusted his approach as needed. He reduced cow numbers from 410 to 350 and saw an immediate improvement in per-cow production.

“We really synced into what Colin was re-enforcing at the time. Pastures can be profitable and they can achieve high per-cow production, you just have to match supply and demand.

“That improved our enduring profitability, which in turn gave us the capacity to really move forward with sustainability projects on the farm. And the Taranaki Regional Council has been a great partner in that, helping us out with subsidised trees for riparian planting.”

Over 15 years, they allocated $20,000–$40,000 each year to environmental projects on the property.

They started with simple tasks, like fencing off waterways and creating a riparian planting plan with native species – a project that continues today, as they gradually replace some plants with larger timbered natives as the originals reach the end of their life cycle.

Farm facts:

Location: Huinga, Taranaki

Structure: Owner-operator

Effective area: 115 ha

Herd size: 350 cows

System: 3

Production: 1342kgMS/ha*

Operating profit: $3801/ha*

Operating expenses: $6.94/kgMS*

GHG emissions: 10.6kgCO_2e/kgMS*

PNS: 80kgN/ha*

*23/24 season

He also soil tested all of the paddocks, which was a “lightbulb moment” as it allowed him to minimise fertiliser usage on high nutrient paddocks and concentrate it on those areas with suboptimal fertility.

The entire farm was also soil mapped, which found there are 17 different types of soil on the property. This helped identify the best areas for applying effluent irrigation.

Other actions include retiring wetlands, which the Attrills did with advice from wetland expert Sophie Arnoux, and identifying and remedying areas of the farm prone to sediment and stormwater leakage into waterways.

Brendan also credits the Taranaki Regional Council, DairyNZ and Fonterra as being pivotal with advice and guidance over the years.

Honouring farmers with an excellent story to tell

The Ballance Farm Environment Awards – including the DairyNZ Sustainability and Stewardship Award – celebrate farmers leading the way in environmental care.

For farmers and growers, the Ballance Farm Environment Awards (BFEA) offer more than recognition – they're a chance to see how your hard work measures up, pick up fresh ideas, and keep your business moving forward.

DairyNZ sponsors the Sustainability and Stewardship Award which recognises dairy farmers who demonstrate a strong commitment to managing, protecting and enhancing their environment.

Facilitated by the New Zealand Farm Environment Trust, the awards celebrate excellence and innovation. Judges take a big-picture view, looking at every aspect of your farm – from water and soil management to climate action, biodiversity, waste, team and community wellbeing, business health, biosecurity and animal care.

You can enter at any stage of your sustainability journey.

Taking part is a great way to get feedback, see what's working well, and learn from others passionate about the food and fibre sector.

Entries are open now, visit **bfea.org.nz** for more information.

BFEA finalist Tor Pedersen hails from Broomore Farm near Raglan, where he balances productive dairy farming with strong environmental care.

Working towards happy, healthy waterways

Looking after the waterways on his family's 300 hectare dairy farm is something Tor Pedersen is hugely proud of.

Broomore Farm near Raglan has 250 dairy cows that graze 100ha, with 50ha used as support land for calves and beef stock, and the rest split between exotic trees and virgin and regenerating native bush.

"We put a big investment in keeping the waterways clean, because we rely on water for everything," says Tor, who participated in the Hill Country Erosion Project and was the Waikato Regional Supreme Winner of the Ballance Farm Environment Awards 2025.

"In our main tributary that runs through the farm, we've got some freshwater mussels and kōura (freshwater crayfish). So that's another big part of us looking after the waterways, because there's life in there, and we want to ensure that they're happy and healthy and are there for generations to come."

Enhancing water quality is the overriding goal for all management decisions on the farm, which participates in a NIWA water quality monitoring initiative.

The work has included increased riparian setbacks and relocating the main race, and the farm is achieving excellent stream health as a result.

For herd health, they changed their breeding programme to crossbreeds a few years ago as they're better suited than Friesians to the challenging topography.

Tor's parents, Tony and Shona Pedersen, own Broomore Farm, with Tor having worked on the farm since 2018 and contract milked since 2022.

Tor's commitment to implementing improvements to enhance production and the wider environment continues his family's strong legacy of prioritising environmental stewardship alongside profitability.

Fine-tuning the ratio of water to grass

On their Culverden farm, Stuart and Tracey Neill's focus on caring for the environment has resulted in better water quality.

The couple, who milk 630 cows on 200 hectares, have invested in drainage systems, sediment traps and riparian planting to reduce nutrient and sediment loss into waterways.

The irrigation on the farm is supplied with water by the Amuri Irrigation Scheme out of the Waiau Uwha and Hurunui rivers.

"It was piped a few years ago, so it's a very efficient system, and water losses are very low," Stuart says.

"We have worked really hard to make our system very water-efficient to use the minimum amount of water to grow grass."

Stuart and Tracey, Canterbury Regional Supreme Winners in the 2025 Ballance Farm Environment Awards, have removed or replaced an original tile drain system and instead created open drains.

They've also implemented extensive planting and have a strong commitment to soil health, with meticulous testing and nutrient management.

"Monitoring is showing we are removing nearly 100% of the nitrates on its journey through the farm. We have shown that we can run a profitable farm without those negative environmental impacts which sometimes occur."

To prioritise the wellbeing of both animals and people, the couple reduced milking from twice a day to 10-in-7 (milking 10 times in seven days).

They also matched inputs to soil types and crops, helping the farm run more efficiently while caring for the environment.

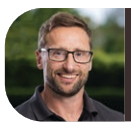
Their approach demonstrates commitment to environmental stewardship, while maintaining the farm's profitability and contributing to the health and sustainability of the local ecosystem.

Stuart and Tracey Neill are putting environmental care first on their Culverden farm.

Shaping smarter rules: DairyNZ's role in Waikato PC1

For over a decade, DairyNZ has invested science, policy and farm system expertise into Waikato Plan Change 1 – helping to create practical, fair rules for farmers.

Shaun Hazelton
DairyNZ senior regional policy advisor



David Cooper
DairyNZ principal policy advisor

Decisions made in regional planning today become the rules we all farm under tomorrow. Since discussions over Plan Change 1 began in 2012, DairyNZ has drawn on its policy, science, farm systems and economics expertise – alongside Fonterra and others – to push for evidence-based, fair and practical rules.

There are around 4500 farms in the catchment, and 1100 individual submissions on the plan were made during the PC1 submission process, many from the dairy and drystock sectors.

DairyNZ developed the Waikato Dairy Leaders Group to lead sector positions. Events were also held to raise awareness and support farmers with their own submissions.

DairyNZ provided internal water quality science, economics and farm systems expertise at all stages of the process, including in hearing panels and at the Environment Court.

The partnership with Fonterra during the Environment Court process reduced costs and ensured expert evidence was aligned for greater impact. DairyNZ also worked with Federated Farmers and Beef + Lamb NZ to agree on wording that strengthened the impact of their submissions.

Direct farmer benefits

Under the original PC1 proposal, farmers would have needed to supply a certified Overseer file to determine whether their farm required consent. With DairyNZ's involvement, the process has changed. Now, only farms that require consent need to supply an Overseer file, saving hundreds of farmers thousands of dollars. The use of Overseer under consents has also changed, ensuring it better reflects the unique nature of each farm.

A further outcome was moving many higher-risk dairy farms from discretionary to controlled activity status, giving these farms clearer rules and more predictable consent requirements. The use of Overseer has also shifted to an approach that recognises work farmers have already done, considering what is reasonably practical to achieve.

This gives farmers greater clarity on what's required, and confidence that their consent will be approved if they meet the conditions.

Farm plans at the centre

The Environment Court has recognised farm environment plans as the central tool for PC1. How a farm uses its plan depends on its activity status.

Farms within permitted limits can use a standards approach, where the plan shows how conditions are being met. Higher-risk farms – those that exceed the threshold for permitted rules – need a consent and a plan showing how farm practices are working towards or achieving industry good farming practice (GFP).

DairyNZ advocated strongly for the recognition of farm plans and sector GFP, throughout the process. This ensures farmers are not restricted through other types of regulation, such as input controls or other inflexible approaches. DairyNZ led the Waikato Sustainable Milk Plan study, rolling out farm plans across the Upper Karapiro and then Waipa catchments to demonstrate the effectiveness of a farm planning approach.

Evidence presented by DairyNZ showed the economic and farm system impacts of the council's original approach, and how using GFP could achieve the same, or better, water quality outcomes while giving farmers more flexibility.

Looking ahead

Although the central government has delayed councils' ability to implement new plan changes until 2027, PC1 is not included in this and is likely to be implemented from 2026.

> ***"This gives farmers greater clarity on what's required, and confidence that their consent will be approved if they meet the conditions.***

Farmers will then have work to do in the first 12 months to ensure they are compliant.

For DairyNZ, the priority has been to take the lead on these changes on behalf of farmers. Work has ensured farmers can operate under the regulations with more flexibility, reduced costs, and greater recognition of the practical tools and practices that are proven to work.

Farmers can stay ahead by keeping an eye on DairyNZ's website, working on their farm plans and developing a better understanding of their environmental performance.

By advocating for practical solutions, DairyNZ has already reduced costs and uncertainty for Waikato farmers, and its work on PC1 may inform how other regions approach water quality planning.

Keep an eye out for some PC1 events early 2026 at **dairynz.co.nz/events** and find out more about PC1 at **dairynz.co.nz/plan-change-1**

The people shaping practical rules for Waikato farmers

Behind every policy win are people who fought for practical solutions on your behalf. Meet four of the many team members whose expertise and dedication helped influence fairer, more workable rules for Waikato dairy farmers.

Mike Bramley

DairyNZ senior area manager – North and South Auckland

Mike was involved from the start through the sustainable milk plan project, which provided evidence on the value of farm environment plans in the PC1 catchment. He facilitated and supported awareness of PC1 with farmers throughout the region, while helping them provide their own submissions.

Dr Craig Depree

DairyNZ principal scientist – freshwater

Craig provided essential Water Quality expertise and evidence through the court hearings process. Craig contributed to expert working groups that represented the dairy voice at the table. He provided credible, in-depth technical evidence to The Environment Court.

Shaun Hazelton

DairyNZ senior policy advisor

Shaun managed stakeholders, balancing different policy positions throughout the process. Shaun managed lawyers, planners, and experts to provide evidence to support the Dairy sector position. His role involved reviewing and dissecting the 20+ other interests evidence and positions, to identify where DairyNZ could influence.

Dr David Burger

DairyNZ chief science and innovation officer

David provided water quality science and modelling expertise during the early stages of PC1, as well as leadership at the governance level. He provided expert evidence to the hearing process and worked with cross-sector groups to ensure the best outcome for dairy farmers could be achieved.

Who's speaking up for dairy in Wellington?

Hon Nicola Willis visited Enda Hawe and Jason Palmer's Rakaia dairy farm as part of the economic growth portfolio, supported by the DairyNZ regional team.

As part of its ongoing advocacy work, DairyNZ engages in cross-party discussions with ministers and MPs, and in policy discussions with key government departments on crucial issues like freshwater, climate and sector stability.

Behind the scenes, DairyNZ actively engages with ministers and MPs across the political spectrum to help ensure dairy farmers' voices are heard where it matters.

Recent discussions have focused on key issues like freshwater, climate and sector stability, supporting decision-makers to better understand on-farm realities and the need for practical, workable policies.

This is part of our ongoing advocacy to contribute to a strong and sustainable future for the dairy sector.

Effective stakeholder engagement relies on open, consistent communication. One valuable forum for this is the Pastoral Sector Group (PSG), which includes DairyNZ alongside key Ministers, chairs, and CEOs from across the sector. Members include Beef + Lamb New Zealand, the Dairy Companies Association of New Zealand, Deer Industry New Zealand, Federated Farmers, and the Meat Industry Association.

Events like Fieldays provide valuable opportunities for face-to-face conversations with ministers and MPs, often on neutral ground and in a farming environment. Alongside these, we run a regular programme of meetings in Wellington and host targeted on-farm discussions and events to connect politicians directly with farmers.

These discussions aren't just symbolic – they allow us to raise key issues, share real stories from farmers, and highlight the practical impacts of policy at the farm gate. They are also a chance to build trust and help make sure dairy's voice is heard clearly and constructively.

Another strong example is Dairy Environment Leaders (DEL). Through DEL, farmers connect directly with government officials, iwi, non-governmental organisations and others shaping the future of farming. It's a space for sharing experiences, raising challenges, and offering practical insights into how policy affects daily farm life.

We advocate to help ensure farmers' experiences and challenges are genuinely heard in government decision-making. By aligning policies with the latest science and farm realities, we work to shape rules that are practical and effective.

Working across parties, we aim to build consistency and long-term certainty, so farmers can plan ahead without being blindsided by shifting priorities.

Ultimately, this advocacy supports a strong, sustainable dairy future that balances profitability, environmental responsibility and community wellbeing. We're always keen to hear your thoughts on our advocacy work – your feedback helps us keep focused on what matters to farmers.

Follow our policy and advocacy work at **dairynz.co.nz/policy-and-advocacy**

Prime Minister Christopher Luxon with DairyNZ Chair Tracy Brown at the 2025 Dairy Stakeholder Breakfast.

DairyNZ's advocacy role through the policy process

Stage of policy development	DairyNZ involvement
Early policy ideas Policy ideas start when issues or opportunities are raised, and the government asks departments to explore solutions.	**We raise key sector issues with MPs, Ministers, agencies and councils to ensure farmers' voices are heard.**
Policy development Government officials prepare advice for ministers, often seeking input through consultation or discussion documents.	**We provide advice, science and farm systems expertise to help shape policy that works on-farm.**
Parliamentary process A draft bill goes through Parliament, including debates, select committee submissions, and possible amendments, before becoming law.	**We submit to select committees and meets MPs and Ministers to give feedback on bills before they become law.**
Implementation & ongoing improvements Agencies implement the law and develop supporting regulations or guidance, with laws reviewed and updated over time.	**Our team translates regulations into practical resources for farmers to help implement new laws, and works across political parties to support stable, improved policy.**

More value for you through strong partnerships

Driving purposeful change in dairying is a team effort.

At DairyNZ, we work alongside trusted partners to stretch your levy further, supporting better farming, stronger communities, and a more resilient dairy sector. These partnerships aren't just about funding. We roll up our sleeves too, offering time, tools and expertise to help deliver what matters most to farmers.

By collaborating with sector leaders, we make an impact where it counts – reducing duplication, promoting better farming practices, and maintaining our independence and credibility. Together, we're building a future that's practical and inclusive, and maintains our competitive edge.

Partnerships with organisations like DWN, NZYF and Pasture Summit reflect our shared commitment to delivering real value for New Zealand dairy farmers. Together, we're shaping a sector that's connected, capable and ready for the future.

Check out **dairynz.co.nz/partnerships** to find out more about our partnerships.

Dairy Women's Network (DWN)

"The success of the partnership between DWN and DairyNZ is driven by a shared vision, strong collaboration, and the alignment of our organisations and our people.
– Jules Benton, CEO, DWN

We've proudly partnered with DWN since its inception in 1998, when the need to elevate the role of women in dairying was recognised. Today, DWN is a trusted not-for-profit organisation, supporting all people passionate about dairy farming.

Through events, resources and support networks, DWN helps rural women build leadership skills, share knowledge, and stay connected in farming life.

Our collaborative partnership, along with strong alignment between both organisations, supports DWN in continuing to deliver initiatives that strengthen the heart of our rural communities.

dwn.co.nz

NZ Young Farmers (NZYF)

"Our partnership with DairyNZ ensures that we can work together to promote best-practice leadership, technology adoption and enhancing on-farm productivity now and into the future.
– Cheyne Gillooly, CEO, NZYF

Young people are vital to the long-term success of dairying. That's why we partner with NZ Young Farmers – a non-profit organisation woven into the fabric of the food and fibre sector.

NZYF offers opportunities to grow leaders through connection and mentoring, exploring career pathways, and building lifelong friendships. Our support helps NZYF run programmes that attract, develop and retain young talent, ensuring the sector remains vibrant and future-ready.

youngfarmers.co.nz

Pasture Summit

"DairyNZ's research and expertise are vital to New Zealand dairy. Partnering with DairyNZ helps Pasture Summit share this knowledge farmer-to-farmer, so research past, present and future makes a real impact on-farm. We also rely on DairyNZ's technical specialists and regional teams to help facilitate and support our events."
– Robbie Ferris, chair, and Al Rayne, director, Pasture Summit

Pasture Summit is a farmer-led initiative focused on securing the future of pastoral dairy food production. Its events and activities bring together practical insights, shared experiences, and a strong sense of purpose. As a key partner, DairyNZ contributes funding, research-backed content, and subject matter experts to help farmers build resilient, profitable businesses and sustainable communities.

Pasture Summit spring events will be held in Taranaki, Thursday 20 November and Canterbury, Thursday 27 November. To register, visit **pasturesummit.co.nz**

Summer smarts

The tools. The timing. The support. All in one place – and made for your season.

dairynz.co.nz/summer-smarts

Summer Smarts delivers future-fit know-how, backed by science, shaped by farmers and tuned to what matters right now.

Reducing heat stress

Heat stress in cows happens when they can't get rid of excess heat, leading to discomfort and lower milk production. Heat-stressed cows eat less to reduce heat from rumination – and you'll feel that in your vat and your pocket. All areas of New Zealand get hot enough to cause heat stress over summer.

To reduce heat stress, focus on:

- Providing shade
- Ensuring a good water supply for drinking and cooling
- Adjusting milking times and routine
- Reducing cow walking time in the heat of the day
- Providing sprinklers in the shed or yard

Work with your farm team to ensure they recognise the signs of heat stress in your herd this summer and take steps to prevent it.

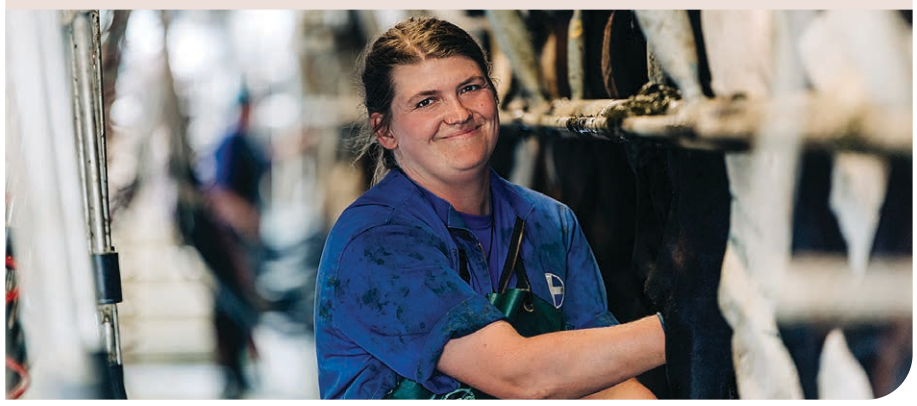
See the five signs to watch for and tips to mitigate heat stress at **dairynz.co.nz/heat-stress**

Read more about heat stress research on pages 16-17

Spend less time milking this summer with MaxT

Shave time off your milking and maintain milk production by using MaxT (maximum milking time). This strategy focuses on increasing efficiency by milking cows for a predetermined time based on milk volume. It defers residual milk to the next milking, when it can be harvested more efficiently, resulting in less time in the shed for staff and cows without affecting milk production or udder health. The bonus is reduced electricity, water and labour costs, with every milking contributing to bigger savings.

Learn how to apply MaxT to your milk at **dairynz.co.nz/MaxT**



Choose the best milking interval for your farm

Flexible milking refers to varied milking schedules beyond the usual once or twice a day. It can help extend the grazing rotation in mid-lactation, reduce stress on cows, decrease work hours and provide more flexibility for your farm team. Research shows that, depending on how flexible milking is used, it can have minimal impact on production.

See how different milking times might affect your weekly schedules and production. Use our Milking Time Planner tool at **dairynz.co.nz/milking-time-planner**

Harvesting more feed

During summer, as soil moisture reduces, pasture growth slows, leading to reduced leaf emergence. Slowing the round length to match the pre-grazing three-leaf stage will help maximise summer growth and boost feed availability for autumn.

A feed wedge is a valuable tool to support your summer pasture management. It makes it easier to see what's happening with your pasture, from tracking pasture cover and spotting surpluses or deficits early to setting grazing targets. It takes the guesswork out of deciding next week's grazing order and helps you make timely, confident decisions with less stress.

dairynz.co.nz/feed-wedges

Efficient supplement use

Supplements can play different roles in your farm system over the summer. Ensure your planned supplements align with your farm pasture growth curve to maximise pasture harvest, crop utilisation and profit while meeting cows' needs.

When unexpected deficits occur during droughts or irrigation restrictions, DairyNZ tools such as the Supplement Price Calculator (**dairynz.co.nz/supplement-calc**) and FeedChecker calculator (**dairynz.co.nz/feed-checker**) will help maximise profit by increasing milk income per kilogram of supplements fed.

Unlock your pasture's power in 5 steps

The strength of New Zealand dairy farming is in making the most of pasture grown on farm – worth around $428 more for every tonne of homegrown feed harvested. Refocusing on the basics, measuring covers, tracking leaf emergence, and using this to set rotation lengths, helps get the best from pasture.

Mark Williams
DairyNZ farm systems specialist

Use DairyBase, milk processor reports, or the DairyNZ pasture and crop eaten calculator (dairynz.co.nz/pasture-eaten) to check your homegrown feed eaten (t/ha/yr), the amount of pasture and crop your cows are actually consuming, and see if you're maximising performance.

1. Gather the data

Regularly measure your pasture to calculate average pasture cover (kgDM/ha) and growth rates. These figures are essential for making informed decisions on rotation length, fertiliser use, and supplementary feeding.

Monitoring pre-grazing covers ensures cows are fed correctly, while managing post-grazing residuals supports optimal regrowth and pasture quality.

2. Record it

At a minimum, record pre- and post-grazing covers and grazing dates. This helps rank paddock performance and identify underperforming areas. Tools like a feed wedge can guide real-time grazing and feed planning, while a rotation planner early in spring supports pasture growth and cow condition ahead of balance date.

Accurate records lead to better decisions and more useful insights from platforms like DairyBase.

3. Check the wedge

Make sure pre-grazing covers meet cow demand and match the wedge target. Ryegrass should have 2.5–3 live leaves (2600–3200 kgDM/ha) for optimal regrowth.

Keep post-grazing residuals at 1500–1600 kgDM/ha to maintain pasture quality and supplement efficiency.

Pasture is the biggest component of homegrown feed – unlock its full potential with good measurement and management.

4. Make the call

If pasture is short, slow rotation, apply fertiliser, and add supplements as needed. Prioritise feeding productive cows and consider culling poor performers. If pasture is surplus, conserve or defer grazing and adjust rotation to maintain quality. Use supplements strategically to support overall feed management, not just production.

5. Keep it going

Measure frequently – weekly during short rotations – to stay accurate and responsive. Timely data helps manage feed surpluses or deficits and improves supplement efficiency.

Trials show that getting cows to produce more milksolids from the same feed can double profit, compared with just cutting supplement costs.

Focus your efforts where they give the biggest return.

Find out more at
dairynz.co.nz/feed-overview

DairyNZ

Progressing Dairy Events

Better Every Season

Progressing Dairy Events are underway with local farmers and DairyNZ experts coming together to share what's working – and why – so we can all improve each season. These on-farm events combine real experience, science, and practical tools you can put to work on your farm.

On-farm and satellite events

Each event is built around real farm examples and local challenges. Host farmers share what's worked, while DairyNZ experts provide insights and tools to help farmers apply solutions on their own farms. Satellite events are also running in remote areas, following the same format on a smaller, practical scale, often led by DairyNZ Farm Systems Specialists.

What farmers are finding useful

- Sessions tailored to your region
- Host farmers and experts sharing practical tools and takeaways
- Time to ask questions, swap ideas, and connect with other farmers.

Farmer-led discussion groups

Discussion groups continue to provide a space to share challenges, successes, and practical solutions. DairyNZ supports them with farm systems facilitation, tools, and science-backed insights.

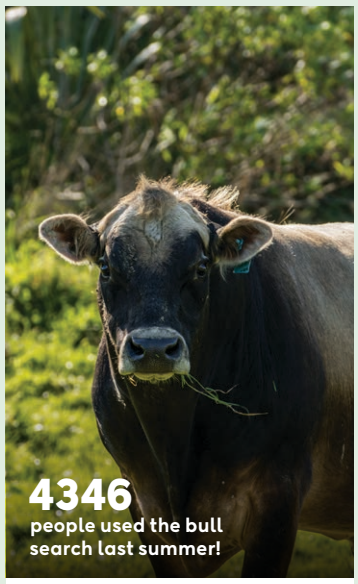
Keeping the momentum going

Whether it's through on-farm events or discussion groups, it's all about learning from real experiences, sharing practical insights, and backing each other with proven advice – helping us all get a little better every season.

Find your local event –
dairynz.co.nz/events

Summer's hottest tools

These summer essentials made the biggest splash last year – here are the trending tools to watch this season.



NZ Animal Evaluation's Bull Search Tool

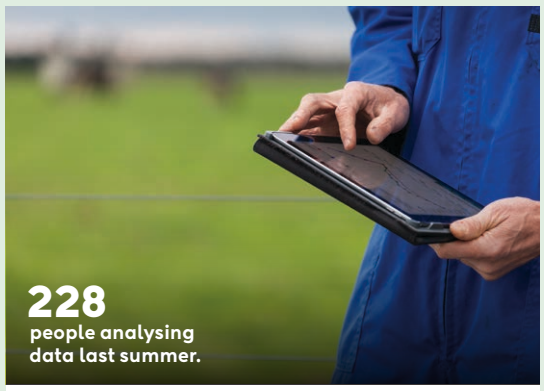
Unlock your herd's breeding potential with our Bull Search Tool, helping simplify breeding decisions, giving you easy access data from bulls across various breeding companies for seamless comparison.

dairynz.co.nz/bull-search

Annual Leave calculator

Calculate your way to better workforce management – your employees and your bottom line will thank you.

dairynz.co.nz/leave-calc



Econ Tracker

Stay ahead of market shifts with economic data that moves as fast as your business decisions need to.

dairynz.co.nz/econtracker

Workplace 360

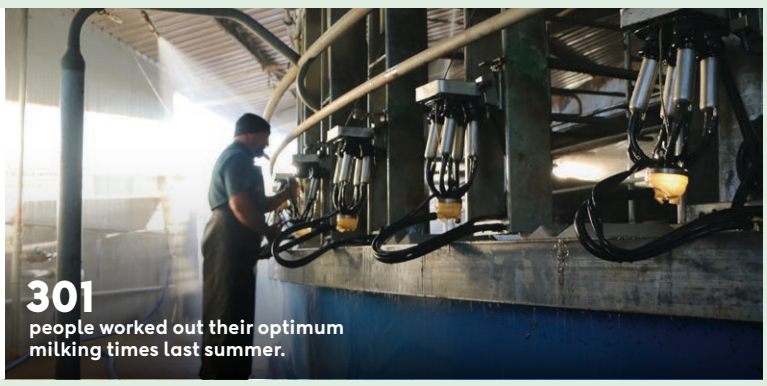
Transform your farm culture from the inside out. A great workplace isn't built overnight, but it starts with knowing where you stand.

dairynz.co.nz/workplace360

Milking Time Planner

Discover if flexible milking could work for your operation – the results might surprise you.

dairynz.co.nz/milking-time-planner



View them all at **dairynz.co.nz/tools**

Get MilkSmart

Free workshop

A big part of your day is spent on milking and its tasks, but even small improvements can boost efficiency, milk quality, and overall farm performance. MilkSmart shows you how.

Whether you're new to dairy farming, or have years under your belt, MilkSmart gives you tools you can use straight away to save time and money in the shed.

Research estimates that some farms could save an average of eight hours per week by using maximum milking time (MaxT - **dairynz.co.nz/maxt**)

MilkSmart workshops are on this summer.

Find one near you and register at **dairytraining.co.nz/milksmart**

DairyTraining
DairyNZ

Farmers leading the drive for Resilient Pastures

Northland farmers at the sharp end of climate change are putting their experience and knowledge to good use, working with DairyNZ and research partners to develop pasture mixes that will underpin hardy and sustainable farming systems for a changing climate.

In Northland, where dry spells are hitting harder and pastures feel the pressure, dairy farmer Chappy McKenzie is looking ahead. He's hopeful a new DairyNZ-led research programme will help his farm adapt and thrive as the climate continues to change.

Chappy has joined a growing network of farmers, DairyNZ and research partners driving the Resilient Pastures programme. It's a chance for farmers to share their on-farm experiences with pasture persistence and productivity, while shaping practical solutions to help farming businesses stay resilient in a changing climate.

Northland farmers like Chappy McKenzie are working with researchers to keep pastures productive during hotter, drier summers.

"The summers are quite tough up here in Northland, real low rainfall and quite hot," says Chappy, who milks 220 cows on 88 hectares in Aratapu.

"I've noticed that seems to be more of a trend now, that the summers are becoming drier."

Chappy (Ngātikahu ki Whangaroa, Ngāi Tūhoe, Ngāti Porou) is a third-generation dairy farmer who's sharing feedback on how increased dry spells have resulted in the need for extra re-grassing to compensate for poor pasture persistence and production.

> ***Our lessons from Northland will be able to extend to regions further south that are already starting to face the same challenges.***

"We used to be solely grass, but now I grow 10ha of chicory each season to get through the summer when pasture growth drops off," he says.

"I hope the new programme can help us build resilience and give us options for the future. I've got a young family, and I want them to still be here in years to come.

"If the Resilient Pastures programme means we don't have to renew pasture as often and it lasts longer, that will make a real difference to our bottom line."

Building pastures that last

The Resilient Pastures programme aims to identify pasture species that are more resilient to climate and weather events, thereby improving pasture productivity.

In the quest to create more profitable forage options, the programme is also looking at identifying pasture species and mixes, and developing management practices that enhance pasture resilience now and into the future.

"Pastures are absolutely central to how we farm in New Zealand," says DairyNZ chair Tracy Brown.

"They're crucial to maintaining global competitiveness, and are a key part of our $27 billion dairy sector in New Zealand.

"DairyNZ's new strategy has really been about bringing focus to the organisation, and much of what we do now is looking out into the future, about the challenges that are coming at us and what we need to do to

Allister McCahon highlights the need for multiple tools to maintain pasture productivity as conditions change.

Farms like McCahon's farm on the Pouto Peninsula, near Dargaville in Northland, are at the forefront of adapting to shifting climate conditions.

support farmers to lean into those challenges. This programme of work is a really good example of that."

The project brings together farmers, sector researchers, Beef + Lamb New Zealand, Māori, rural professionals and government partners.

Elena Minnee, a senior scientist at DairyNZ, says changing weather patterns are reducing pasture growth, quality and persistence.

"Increasingly hot days and flooding events are putting real pressure on how much pasture is grown, its quality, and how long it lasts," she says.

The programme focuses on Northland, Waikato and Bay of Plenty, where these impacts are being felt most strongly.

"Our lessons from the upper North Island will be able to extend to regions further south, as they start to face similar challenges to their pasture persistence and productivity in the future.

"And the insights and solutions that are developed in the upper North Island will become relevant nationwide over time, as climate challenges become more prevalent."

The programme aims to find multiple solutions to fit farmers' diverse systems and needs, with farmers gaining improved returns from spending on seed as a result.

Homegrown feed is the backbone of New Zealand dairy farming, and there is concern that increased reliance on imported feed could undermine this significant advantage.

Pasture has traditionally been essential to NZ's low-cost, low-emission food production, with over 80% of the diet of livestock coming from pasture.

DairyNZ data analysis shows that pasture harvest has been reducing per hectare, at a rate of one tonne of dry matter per decade in Northland, and half a tonne of dry matter per decade in Waikato.

To compensate, farmers may need to re-sow pasture more frequently or bring in supplementary feed.

A key aspect of the Resilient Pastures programme is to ensure that solutions can be adopted on-farm and still support profitable and sustainable farm practices.

On-farm insights driving solutions

Te Marie farmers, Allister, Maree and Kieran McCahon, who're also taking part in the programme, value the fact that the project is based on farmer experience.

"I guess it's an opportunity for other regions to look to us to provide some of those solutions," says Kieran, who contract milks 900 cows on 430ha near Dargaville.

"Northland is naturally variable, which is helpful to the project. It allows us to capture some of that variation in soil and climate, which I think is really important for a long-term trial.

"We have a history of long, extended dry summers. Other parts of the country are starting to see that more frequently now too, so the benefit of doing this research in Northland is that we're ahead of the curve, in that we've adapted, and we've already been working through solutions that have been road-tested," he says.

> ***Part of this project, to me, is giving other farmers confidence that there are alternative species out there and that other people are giving it a go.***

"As the climate warms, the conditions we already experience may become more frequent further south."

Kieran says for the next few years, he'll be diligently measuring pasture growth before and after every grazing in the project plots.

"I quite enjoy working with alternative pasture species, because I get to see how they react differently to weather conditions, and see the change throughout the seasons.

"Part of this project, to me, is giving other farmers confidence that there are alternative species out there and that other people are giving it a go. We'll be comparing the growth of different species over the life of the project."

Allister notes that, typically, the role of artificial nitrogen, silage and, more recently, palm kernel extract has masked the impact of declining pasture productivity.

"There's unlikely to be a silver bullet solution," he says.

"We need a range of tools for a range of climatic conditions – and that's the big driver of this project. Rather than focusing on a single solution, we will need to explore a range of solutions to help us navigate more challenging or frequent adverse events.

"If climate change is going to erode our profitability around the margins, we have to strive to look for solutions to push back against that. And homegrown feed is the key to profitable pastoral grazing systems in New Zealand."

Allister supports a renewed focus on pasture management, and well-timed supplementary feeding will be key to success, particularly as changing rainfall patterns make short-term decisions more critical than ever.

The Resilient Pastures programme is a DairyNZ-led, seven-year, $17 million cross-sector research and extension initiative, jointly funded through the Government's Primary Sector Growth Fund (PSGF), administered by the Ministry for Primary Industries. Programme funding partners include Beef + Lamb New Zealand, TR Ellett Agricultural Research Trust, Hine Rangi Trust, Northland Dairy Development Trust, Barenbrug, and Fonterra.

Find out more and stay up to date with the research at **dairynz.co.nz/resilientpastures**

Kieran McCahon tracks pasture growth to test climate-resilient species and share practical insights.

Working towards cooler cows

DairyNZ researchers have mapped the regions where cows are most at risk from rising temperatures – and are developing resources that will help farmers in those areas mitigate the effects of excessive heat load on their animals, which can impact their feed intake and milk production.

Across the 2020s, the number of heat stress days per year ranged from 37 in Otago-Southland to 69 in Waikato/BOP and 80 in Canterbury.

Key points:

- Heat stress is already affecting New Zealand cows and farms, and warmer, drier summers mean the risk is set to increase in the future.
- Cows can start feeling heat stress at temperatures above 20°C, which affects their comfort, wellbeing and milk production.
- DairyNZ is using digital tools, large datasets, and farmlet trials to test practical heat stress mitigation strategies and gain insights into the effects of heat stress on milk production and cow comfort.
- Farmers are actively involved in shaping the research, ensuring solutions are practical for on-farm implementation.

With New Zealand cows grazing outdoors and directly exposed to the sun, heat stress is a growing challenge. It affects cow comfort, productivity and wellbeing – and farmers are looking for practical, proven options to manage the risk.

Heat stress occurs when cows can't shed excess heat, leading to discomfort and reduced milk production and with warmer, drier summers, the risk of heat stress is set to rise across all dairy regions.

Unlike humans, who are comfortable between about 16 °C and 24 °C, cows start to experience heat stress at temperatures above 20 °C. Their comfort zone ranges from roughly 4 °C to 20 °C. They generate a lot of heat digesting feed and producing milk and it makes it harder to maintain an ideal body temperature in summer, especially when they absorb extra heat from their surrounding environment.

Early heat stress research in New Zealand had its limitations, mainly because of the data available at the time. Most global studies use the temperature-humidity index (THI), which works well for indoor housing systems. But in New Zealand's pasture-based systems, where cows are outdoors and exposed to changing weather, solar radiation and wind, THI is less suitable. This highlighted the need for a more tailored approach, leading to the development of the Grazing Heat Load Index (GHLI) *(see breakout box for more information)*.

Over the past year, we've surveyed and held workshops with farmers to capture their views on heat stress risk and mitigation. Farmers told us they want to know whether the predicted risk matches what they see on-farm, particularly in Canterbury, and whether it's the total heat over the day or short periods of intense heat that have the biggest impact.

Farmers are skilled at recognising when something isn't right with their animals, but they can't be in the paddock 24/7. Digital tools, such as wearable sensors and milk vat monitoring systems, are starting to capture near real-time changes in cow temperature, activity and production.

This gives researchers access to more precise datasets for analysis. Just 10 years ago, a scientist observing a cow's respiration rate in the paddock might have assessed one cow per minute. Today, rumen temperature can be measured continuously in every cow using boluses, vastly increasing the data available to inform better solutions.

The DairyNZ 'Comfortable Cows Outdoors' research project is using data to help identify when heat stress happens, how severe it is, and which interventions make the biggest difference.

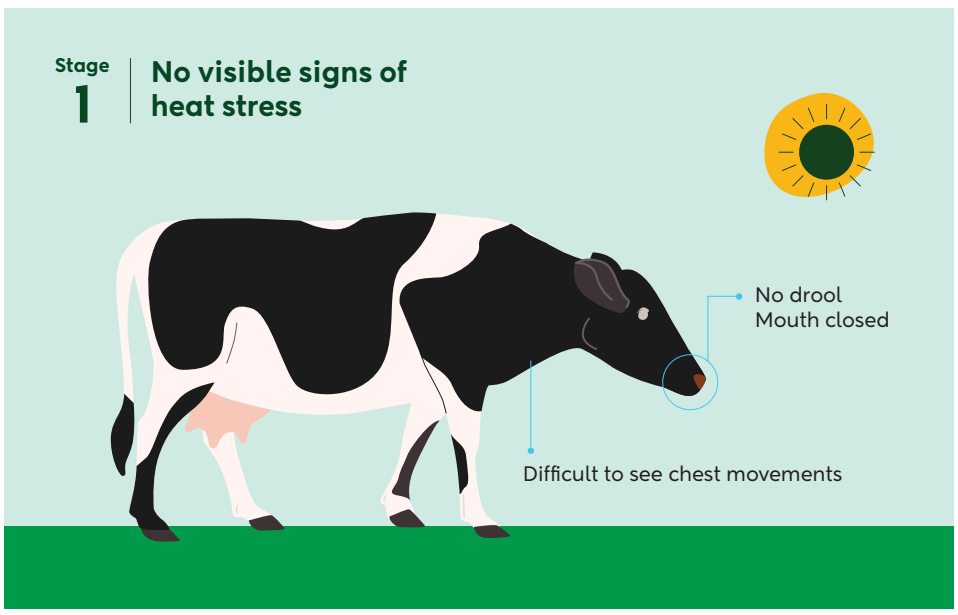
Heat stress impacts vs the cost of mitigations

Many farmers are asking the same questions: we know heat stress affects cows, but what does that mean for milk production and composition – and how do those losses compare to the cost of mitigation?

Previous studies have struggled to pin down the real impact, as it hasn't always been clear whether drops in milk yield were from heat stress or simply changes in herd numbers or feed quality at the time.

A new study is being proposed to close that gap by pairing on-farm technology and/or sensor data, and milk yield data

The three stages of heat stress



A smarter way to spot heat stress in cows

The Grazing Heat Load Index (GHLI) predicts the likelihood of heat stress occurring in grazing cows using temperature, solar radiation and wind speed. Developed through the New Zealand Bioeconomy in a Digital Age (NZBIDA) programme with AgResearch, DairyNZ and Fonterra, it's been refined using farm data from across New Zealand to be regionally relevant.

with on-farm weather records. This would help show when heat stress affects milk yield, and by how much.

Workshop discussions also showed farmers want to understand the costs and benefits of different mitigation options – both on their own and in combination – and which strategies manage heat stress risks most effectively with minimal disruption to the business.

Farmers are helping design farmlet trials for the DairyNZ research farm. The aim would be to test and compare a range of practical and relatively easy to implement heat stress mitigation strategies New Zealand farms are already using.

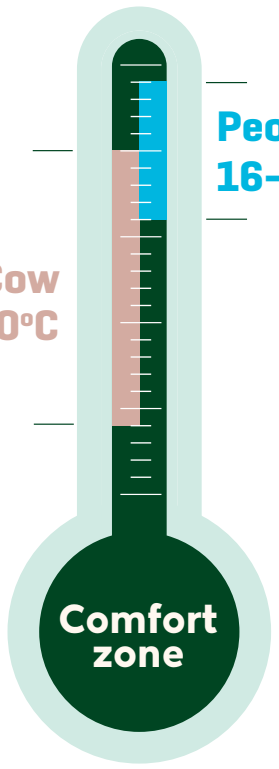
For example, 65% of surveyed farmers in Waikato/Bay of Plenty and 40% in Canterbury are reported to have a misting or sprinkler system installed in the yard.

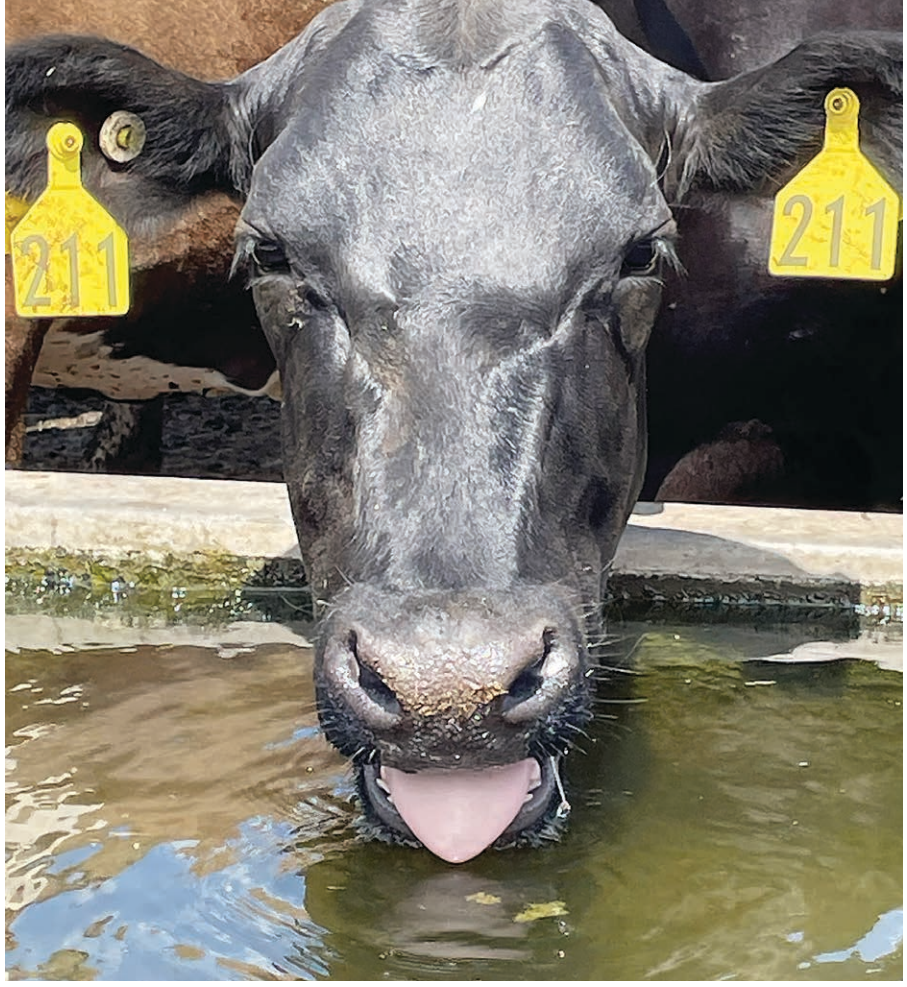
This trial may also look at the effect of adjusting milking frequency or shifting the timing of afternoon milkings to avoid walking and having cows standing in the yard during the hottest part of the day, and whether there is any variation in heat stress risk for different breeds. We aim to begin these trials this summer.

As consumer expectations around ethical and sustainable food production continue to grow, animal wellbeing is under increasing focus. In pasture-based systems, cows face climatic extremes, and heat stress can affect their comfort, health, and productivity. Current on-farm options are limited and many rely on shade or shelter.

DairyNZ research will help create resources and cost-effective strategies for managing heat stress and help farmers make informed decisions to improve cow wellbeing and farm performance.

This research is part of DairyNZ's Enhanced Animal Care Programme, funded by New Zealand dairy farmers through the DairyNZ levy.





Dairy cows experiencing a hot summer day in the Waikato and the importance of water access. Captured on DairyNZ researcher Dr Kirsty Verhoek's home farm.

Heat stress research progress

Done

- Developed an index to predict heat load
- Identified high-risk regions for heat stress
- Surveyed farmers on heat stress management and attitudes
- Hosted farmer workshops to understand research priorities

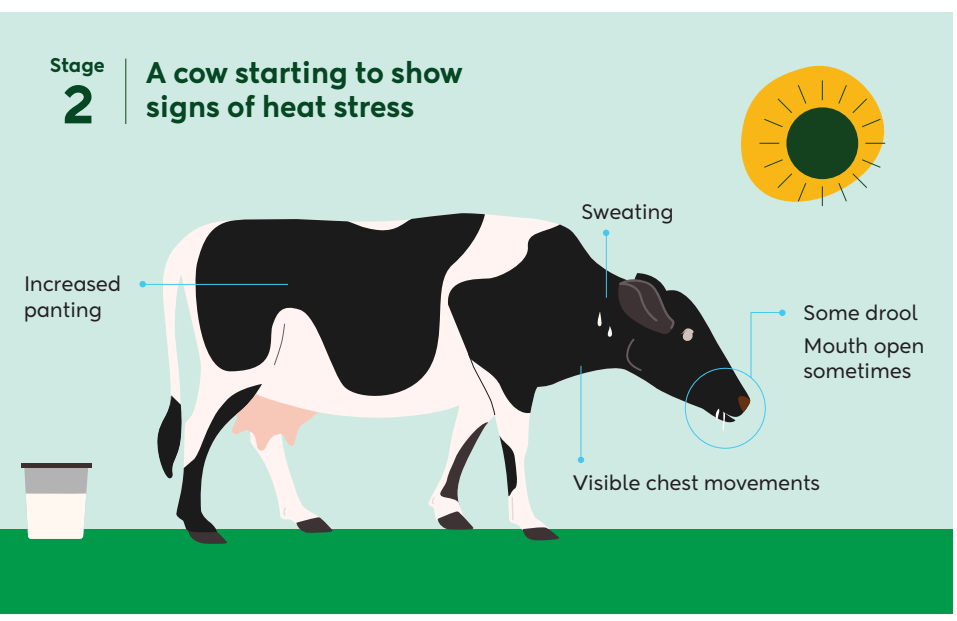
To do

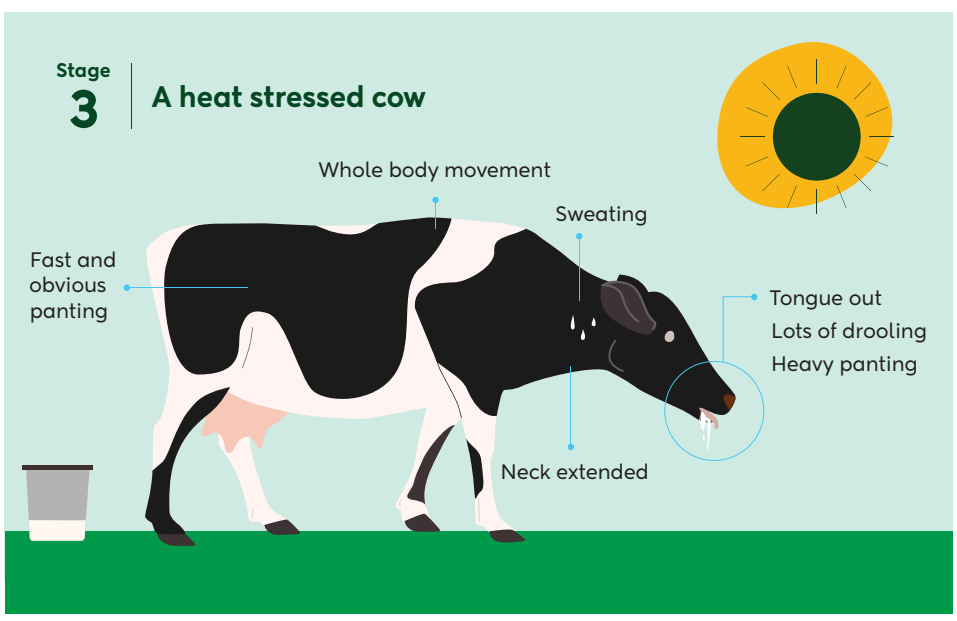
- Determine the impact on milk production
- Evaluate on-farm mitigation options
- Identify individual cow variation
- Define wearable indicators of heat stress

Find out more about the research and stay up to date at **dairynz.co.nz/heat-stress-research**

Find more information on managing heat stress at **dairynz.co.nz/heat-stress**

Some of the team behind the heat stress research: Dr Charlotte Reed, Dr Kirsty Verhoek, Dr Paul Edwards, Dr Stacey Hendricks, Dr Jenny Jago and Jac McGowan.





Understanding cow wellbeing today helps keep New Zealand dairy competitive and ready for the future.

Cow care helps set New Zealand dairy apart

Animal wellbeing is in the spotlight, and DairyNZ is drawing on new research to show how our pasture-based farms measure up worldwide.

Expectations around farming are constantly evolving. Where the historic focus was on milk quality and food safety, today's requirements also include animal health and emissions. The attributes of high-value milk continue to shift alongside customer demands.

> ***Highly controlled environments can influence a cow's wellbeing in both positive and limiting ways.***

In New Zealand, dairy competitiveness is about more than keeping costs low. Using futurist thinking can help us explore how animal care and farming might change in response to environmental limits, new technologies, and shifting societal expectations.

This approach highlights possible pathways for the sector and helps farmers consider options for adapting and thriving into the future.

The Competitive Farm Systems – Frontier Farms project examined which parts of New Zealand's dairy system are already well-positioned to meet future needs.

Early findings show that animal wellbeing ranks among the top five factors for keeping the sector competitive. At the same time, the diversity of systems worldwide makes it challenging to compare performance and identify where strengths and risks lie.

Led by Lee Matheson from Perrin Ag, with input from animal welfare scientists, farm systems experts, a farm consultant, and customer insights specialists from dairy companies, a global typology framework that groups farms into different 'types' based on eight shared characteristics has been used to explore cow wellbeing across farm systems.

The classification highlights where New Zealand farms share common traits and where they differ, both within the country and compared with farms overseas.

The global typology study looked beyond physical farm features to how resources and animal care practices affect cow wellbeing. Cows only have a limited amount of time each day to choose what they want to do. Much of their day is taken up with walking to and from the shed, being milked, and grazing. The remaining 'free time' can be spent lying down, exploring, or socialising. The DairyNZ typology framework included milking frequency as a key characteristic to show how cows that are milked three times a day, instead of twice-a-day, have less 'free time' which limits their ability to do what they choose.

The framework was applied across dairy systems in the United States, Ireland and China, allowing for meaningful comparisons (*see graphic*).

A key finding was that highly managed or controlled environments can influence a cow's wellbeing in both positive and limiting ways. For example, housed systems may help cows stay within a comfortable

DairyNZ is exploring how wearable technology can provide new insights into cow wellbeing.

temperature range and provide shelter, but they can also restrict access to pasture and reduce opportunities to move and explore. Understanding the benefits and trade-offs of the eight characteristics helps assess cow wellbeing across different farm systems, whether in New Zealand's pasture-based systems or in housed systems overseas.

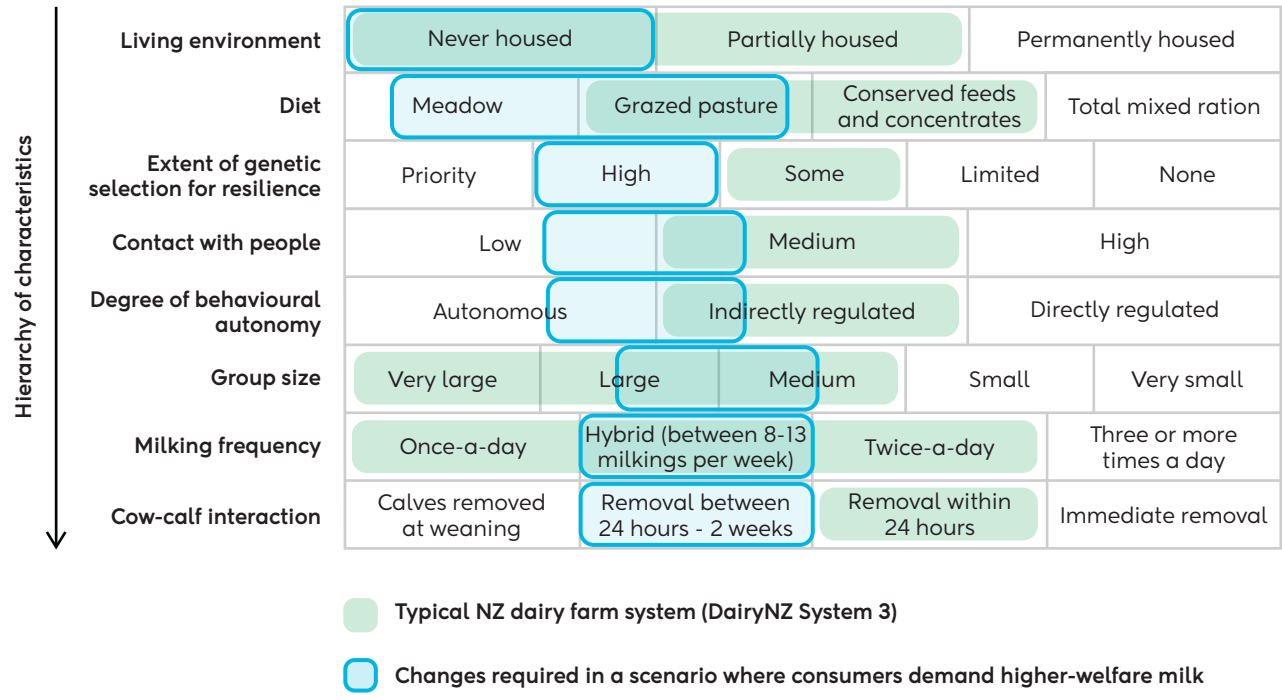
With animal wellbeing increasingly in the spotlight, understanding how New Zealand farm systems affect cow wellbeing helps show where the sector stands internationally and how it may evolve. DairyNZ is keeping an eye on emerging risks and investing in future-focused research to ensure the sector continues to meet evolving consumer expectations.

To find out more about the Frontier Farms project, check out **dairynz.co.nz/mega-dairies**

Some of the team behind animal wellbeing research: Dr Stacey Hendriks and Dr Paul Edwards

Global framework for classifying cow wellbeing on dairy farms

Hierarchy of characteristics showing the position of a typical New Zealand dairy farm and what on-farm changes could be required in a future scenario where consumers demand higher-welfare milk.



Putting pasture-based wellbeing to the test

Animal-based welfare indicators let us know how well a cow is coping with her environment.

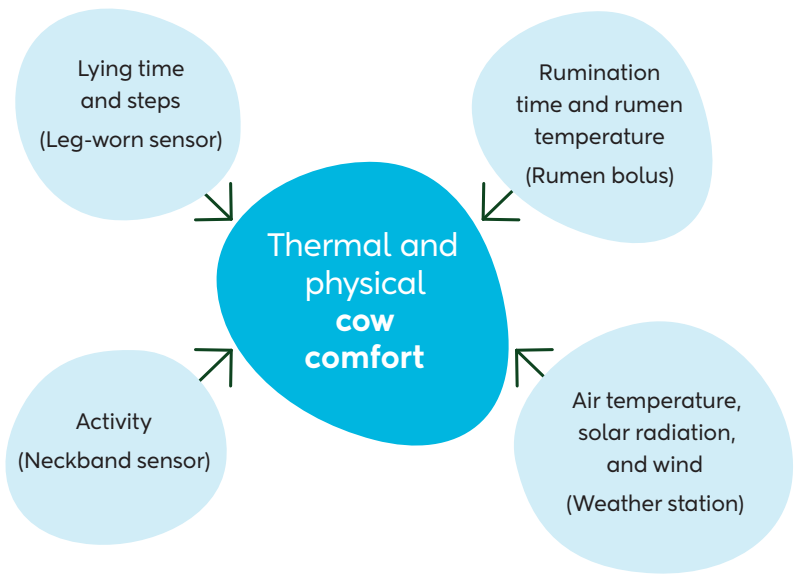
Demonstrating the high levels of animal care on New Zealand dairy farms means having reliable, practical tools that measure wellbeing in ways that suit our systems. Because our cows are farmed differently to most dairy systems globally, existing wellbeing measures aren't well suited to New Zealand. Many focus on a single moment in time and don't reflect the seasonal variation of our pasture-based farming.

Capturing dairy cow wellbeing across the year is important – for example, what's measured in winter or during peak lactation may not reflect summer conditions, so a seasonal view gives a clearer picture.

Looking ahead, as the sector is asked to show how cows are cared for, we need methods that don't add extra work for farmers and, ideally, give useful insights on the farm.

Building a practical picture of cow wellbeing

How welfare indicators and weather data from existing sources are being combined to develop a new way to measure cows' thermal and physical comfort throughout the season.



That's why this work in the Cow Quality of Life project is focused on developing a 'future-ready' tool that draws on data already at hand. The aim is to use readily available indicators – the kind you could access tomorrow without creating a major burden – to give a practical picture of wellbeing on-farm.

An animal-based welfare indicator is a measurable sign that tells us how well a cow is coping with her environment. It can be something physical, like body condition or rumen temperature, or behavioural, like lying time or how cows interact with each other. By looking at these indicators across a farm or season, we can get a picture of the cows' overall wellbeing.

Welfare indicators can include both resources and management practices – for example, the number of water troughs, or farm policies for identifying and treating health issues. While animal-based indicators are preferred, they are often harder and more expensive to measure.

DairyNZ's animal welfare and behaviour expert, Stacey Hendriks, is using data from wearable technologies to track cow behaviour and physiology.

"By combining measures like lying time and rumen temperature with on-farm data such as weather, we can link these insights to cow wellbeing across the season. This gives us a way to demonstrate the high standards of care farmers already deliver," Stacey says.

> ***"These insights can be linked to cow wellbeing across the season, providing evidence of the high standards of care farmers already deliver.***

"Over time, these tools could also build a long-term record of wellbeing on New Zealand dairy farms, supporting farm management, transparency and confidence in the products we produce."

At this stage, the project is focused on exploring historical data to develop a tool before moving into experimental trials this summer.

With animal wellbeing increasingly in the spotlight, New Zealand's dairy sector has an opportunity to highlight the strengths of its existing systems. By developing tools suited to our pasture-based systems, DairyNZ aims to give farmers practical ways to understand and maintain high standards of wellbeing while supporting the long-term sustainability of the sector.

Purpose-built facilities at DairyNZ's Lye Farm help turn science into practical tools for farmers. Pictured: technical team leader Olivia Jordan and scientist Dr Konagh Garrett during a trial using the new roughage intake control feed-weigh bins.

Where today's questions become tomorrow's tools

Lye Farm, one of DairyNZ's research farms located near Hamilton, uses purpose-built facilities, specialised feeding equipment, and trained cows. These facilities enable trials of new approaches under pasture-based farming conditions typical of New Zealand.

Farming is constantly evolving, with ongoing challenges around emissions, efficiency, and time management. New Zealand dairy farmers are under growing pressure to balance productivity with environmental responsibility. Levy-funded research is developing practical, science-based solutions to help meet these demands.

At DairyNZ's Lye Farm near Hamilton, purpose-built facilities and a skilled research team are exploring ways to tackle these challenges – from improving feed use and on-farm efficiency to reducing emissions. The goal is to turn today's questions into tomorrow's tools for farmers.

Purpose-built facilities, including specialised feeding equipment and trained cows, allow researchers to test new ideas under New Zealand farming conditions. Every part of Lye Farm is designed to support robust trials that deliver insights farmers trust and can apply.

As a national resource, Lye Farm plays a key role in developing science-based solutions to progress New Zealand dairy. This includes research into reducing greenhouse gas emissions – a growing focus as the sector works to meet government targets and market expectations.

A recent addition is 20 new roughage intake control (RIC) feed-weigh bins, designed by Dutch company Hokofarm Group and used in research facilities worldwide. These bins expand the farm's research capabilities, enabling larger and more targeted trials that generate richer, more valuable data.

This infrastructure also makes Lye Farm a hub for strategic partnerships. Projects like Emissions4Pasture, run in collaboration with Irish researchers, allow seasonal data to be collected across hemispheres, accelerating insights and helping get practical solutions to farmers sooner.

Lye Farm is underpinned by farmer levy investment and strengthened by collaboration with commercial and research partners, ensuring the science stays grounded in real farm needs and delivers practical, profitable outcomes for New Zealand dairy.

Facilities in action

New Zealand dairy farmers are looking for practical ways to reduce methane emissions without compromising productivity. Recent research shows cows produce relatively low emissions when grazing good-quality pasture. One question now being explored is whether supplementary feeds, especially those high in starch or fat, can further reduce emissions when used alongside pasture.

To investigate this, DairyNZ has commenced a 'Targeted Supplementary Feed' project at Lye Farm. The research aims to find out whether different types and amounts of starch- and fat-based supplements affect methane emissions in dairy cows. It will also look at how these effects change with seasonal shifts in pasture quality.

The results may show that supplements don't reduce methane, which would still be an important finding, or that only certain types, fed at specific times of year, are effective.

A new trial is now underway, using both the existing Calan Gate System and the new RIC feed-weigh bins. These facilities let researchers track each cow throughout the day, giving detailed data on feed intake, feeding behaviour, and how these relate to methane emissions.

Sixty cows are involved in the trial, housed for up to four weeks. They are fed fresh pasture twice daily after milking, mimicking paddock feeding, using a cut-and-carry system, where grass is harvested from the paddock and fed in the individual bins. This setup allows precise measurement of how much each cow eats.

In the Calan Gate system, pasture is weighed in and any leftovers are weighed out, giving an accurate forage intake. The new RIC feed-weigh bins automate this process: when a cow approaches a feeder, her EID tag is scanned, and the bin tracks how much she eats, when, and for how long – offering deeper insights into feeding patterns and methane output.

Cows continue to be milked through the Lye Farm milking shed, and supplements are carefully weighed to ensure each cow receives her allocated amount before pasture is offered.

Rumen samples are taken during the trial to monitor changes in the microbiome, helping researchers understand how different supplements affect digestion and methane production.

To measure cows' methane emissions, the animals have access to GreenFeed units – specialised machines that offer a small amount of pelleted feed to encourage cows to visit. The GreenFeed unit scans the cows' EID tags, drops a small amount of pellets (~30g) several times over a four-minute period, and samples the methane, carbon dioxide and hydrogen in their breath.

Multiple visits to the GreenFeed unit throughout the day build a detailed picture of each cow's daily methane emissions.

By mid-2026, the Targeted Supplementary Feed trial is expected to deliver insights into whether supplements can reduce methane emissions, and if so, what type, how much, and when during the season they are most effective.

The trial will also assess animal performance and economic feasibility, helping farmers weigh up the cost-benefit of using supplements as a mitigation strategy.

These findings will support farmers in making informed decisions about feed use on their own farms, ensuring that any changes can be backed by science and tailored to New Zealand's pasture-based systems.

For more information on this project visit **dairynz.co.nz/pasture-emissions**

Some of the team behind reducing greenhouse gases research: Dr Konagh Garrett, Dr Kirsty Verhoek, Dr Jane Kay, Mark Bryant, Stu Morgan and Olivia Jordan.

Roughage intake control feed-weigh bin

DairyNZ Research Farms

DairyNZ's research farms are an important industry resource, providing working farm environments equipped with scientific expertise and infrastructure. These farms enable practical trials on pasture systems and animal performance, helping generate insights that can be applied on-farm. DairyNZ also partners with other farms and facilities across the sector to broaden the reach and impact of its research.

Find out more at **dairynz.co.nz/research-farms**

Life as a research cow

To understand how different feeds affect methane emissions and productivity, researchers need precise, individual-level data. This requires cows trained to use specialised equipment so their feed intake and methane output can be measured accurately. At DairyNZ's Lye Farm, a select group of cows take on this important role.

Not every cow joins the research team – but for those that do, it's a special job. Before each trial, cows spend time in a dedicated training barn where they learn to interact with feed bins and the GreenFeed units. Calm, comfortable cows are essential for reliable results, so the training is designed to be low stress and rewarding.

Training takes around two weeks and happens only once in a cow's lifetime. With their strong memories and love of routine – especially when food is involved – most cows adapt quickly. A small number are excluded, usually because their behaviour makes it hard for others to eat or act naturally. On average, only about 2% don't complete the programme.

Methane research doesn't only happen within these facilities. Some trials can use the GreenFeed units in the paddocks. Around 80% of cows adapt to using the outdoor GreenFeed units easily. Each unit serves about 25 cows, so multiple units are used for larger groups. While methane can be measured in grazing cows, accurately tracking pasture intake is challenging, which makes indoor-based trials essential for certain studies.

The team at Lye Farm enjoy working with these animals and describe them as intelligent, curious, and full of personality. Once their research role is complete, the cows return to the main herd and continue their normal routines, still contributing to knowledge that helps farmers make smarter decisions.

Find out more about Lye Farm at **dairynz.co.nz/lye-farm**

Did you know?

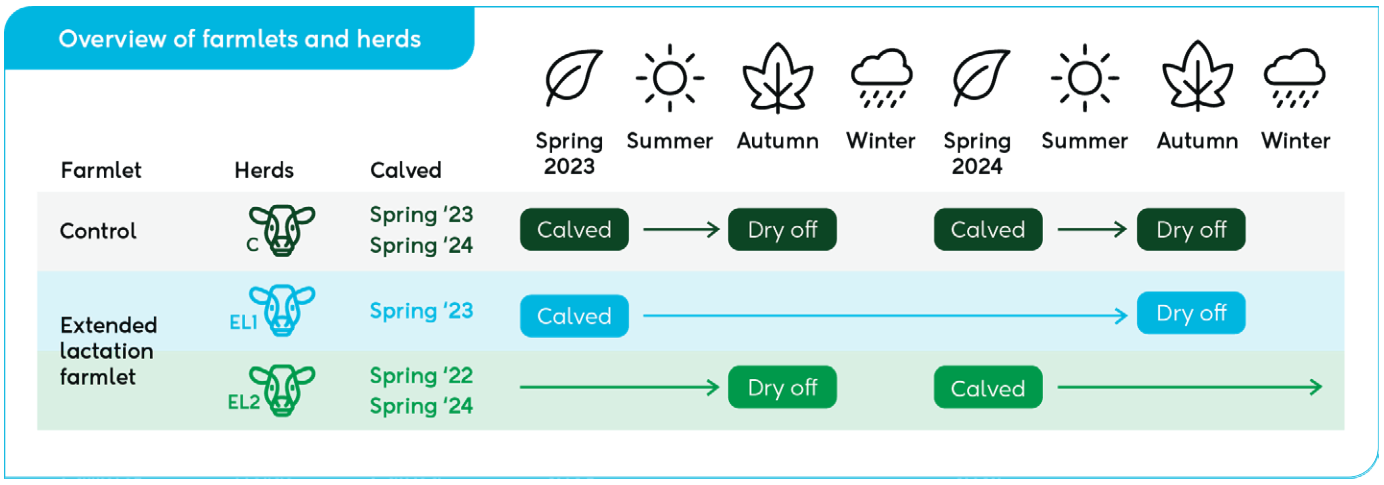
- Most cows complete training in 2 weeks
- Only about 2% are excluded
- GreenFeed units can measure methane while cows are grazing
- Cows return to the main herd after their research role ends.

New phase for extended lactation study

After two years exploring extended lactation to reduce peak workload and non-replacement calves, the Extended Lactation project has added a commercial farm alongside the existing farmlet trial.

Dr Paul Edwards
DairyNZ senior scientist

Overview of farmlets and herds



At DairyNZ's Scott Farm, Hamilton, researchers have spent two years testing a 24-month calving interval versus the usual 12 months. The farmlet trial has recently expanded, with Jersey herds added, and a commercial farm is also piloting the system.

The concept was flagged for study in a co-design workshop, with farmers and rural professionals keen to smooth peaks in labour demand. The workload over spring was identified as a key pressure point.

Initial modelling suggested that a 24-month calving interval, with half the herd calving each spring, was the most profitable extended lactation system.

Profitability was predicted to be higher in Northland, similar in Waikato, and slightly lower in the South Island than for a 12-month interval. Eighteen-month calving intervals are likely harder to manage, with spring–autumn shifts and pasture not always matching herd demand. Milk production may rise, but profit was predicted to fall due to extra feed requirements.

The farmlet study has tested a 24-month calving interval with Friesians under Waikato conditions. Half the herd calves each spring. After two seasons, milksolids production, operating profit, and sustainability were similar to the control group (*see table 1 for the results*).

Table 1: Performance of control and extended lactation (EL) farmlets across two seasons

Season	2023-24			2024-25[1]		
Farmlet (2.8 Friesian cows/ha)	**Control**	**EL**		**Control**	**EL**	
Calving timing[2]	Spring 2023	Spring 2023	Spring 2022	Spring 2024	Spring 2023	Spring 2024
Days in milk	251	311	297	246	283	294
Milksolids (kg/cow)	422	506	364	446	344	528
BCS at 31-May	4.7	4.1	5.8	4.8	5.8	4.1
Milksolids (kg/ha)	1,183	1,223		1,250	1,228	
Total supplementary feed offered (t DM/ha)	1.74	2.30		3.02	3.47	
Imported supplementary offered[3] (t DM/ha)	1.48	2.22		1.45	1.74	
Estimated operating expenses[4] ($/kg MS)	5.18	5.16		5.14	5.21	
Estimated operating profit[4] ($/ha)	3,966	3,946		4,243	3,891	

1 Drought conditions experienced.

2 In spring 2023 both farmlets had a planned start of calving date of 4 July, but in spring 2024 the EL farmlet had a planned start date of 22 July.

3 Excluding conserved pasture made within the production year or carried over from the previous year.

4 It is currently unknown the extent of labour saving, so labour expenses were assumed to be the same between farmlets. Greater repairs, maintenance and depreciation expenses were assumed for EL to reflect the impacts of winter milking and use of a feed pad during wet conditions.

> ***"They noticed their farm manager seemed significantly less stressed during calving."***

Challenges of extended lactation

Initially, the extended lactation farmlet needed 180kg of dry matter of extra feed per cow to keep the herd milking through winter. To reduce feed demand in the following season, autumn pasture cover was increased, and calving was delayed. But extra supplements were still needed, and the later calving meant fewer days in milk, lowering production and profit. The farmlet has since returned to the usual calving date, with extra winter feed now planned.

Positive effects

With a 24-month calving interval, a typical 22% replacement rate is reduced to 11%, potentially aging the herd considerably. To keep a balanced age structure, 33% of the half of the herd that is calving each year are first calvers, making an effective replacement rate of 17%.

With fewer calvings and a lower effective replacement rate, non-replacement calves drop by nearly 60%, making it easier to rear the rest as dairy-beef.

At a national scale, this system could see all non-replacement calves reared and finished within existing land and feed capacity, offering a practical, sustainable pathway for managing non-replacement calves.

Jersey farmlets were added in June 2025 to explore their performance under extended lactation and the potential for crossbreds.

How it stacks up on a commercial farm

After promising results in the farmlet trial, a commercial farm was sought to pilot the system under everyday conditions. It's important to see how the system affects farm staff – something a farmlet trial can't fully capture.

Sharemilkers Ben Fisher, Emma Gardiner and Caleb Higham have transitioned their 240-cow herd at Gordonton to the 24-month calving interval system. They mated only 60% of their crossbred herd in spring 2024 and completed calving in early September 2025.

Ben says the trial is going well, with most cows performing strongly.

"They milked well through the winter. One cow did dry herself off, and there is one more to cull, but we expected the system wouldn't suit all."

They noticed their farm manager, Matias Campello, seemed significantly less stressed during calving. They had a compact 6-week mating period and used sexed semen, so most of the heifer replacements were in the calf shed in the first three weeks.

Ben said they had a similar proportion of cows with health and metabolic issues through calving, but since only half of the herd had calved, the total number was less.

And they noted the reduction in bobby calves.

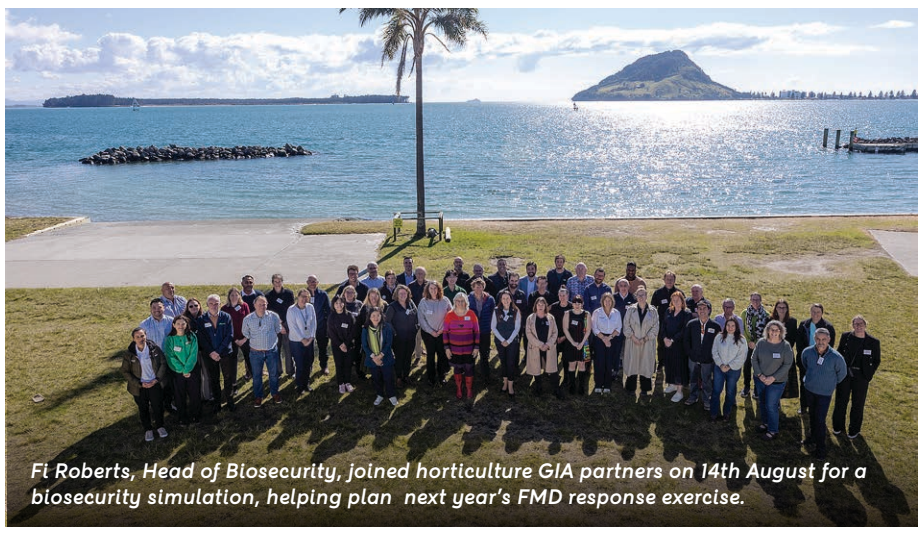
"We used some beef semen as well, so the only real bobbies were from the two-year-old first-calving cows."

Emma is keen to continue the trial and looks forward to seeing how calving progresses. She sees the advantages of having a smaller number of cows to mate and calve, but recognises it requires a huge mindset change, particularly seeing the cycling of cows whose mating has been delayed a year.

Follow the project's progress at **dairynz.co.nz/frontier-farms**

Snapped on and off farm

A snapshot of DairyNZ at work in the regions with and for farmers.



Fi Roberts, Head of Biosecurity, joined horticulture GIA partners on 14th August for a biosecurity simulation, helping plan next year's FMD response exercise.

A Southland farmer develops a terraced wetland in a small gully as part of Waimea Catchment Group work.

AgResearch technician applies urine from cows grazing plantain to lysimeters as part of the DairyNZ-led Plantain Potency and Practice programme.

A trial at DairyNZ's Scott Farm is testing grazing strategies using underground rhizotrons (tubes installed underground) to develop updated guidelines that improve perennial ryegrass persistence and pasture productivity in summer-dry regions.

More than 150 farmers came together in June for the first Taranaki Dairy Event, where they learned from experts, shared ideas, and heard inspiring stories about resilience and success from former All Black Conrad Smith.

DairyNZ supported a biodiversity project at Pāmu Eyrewell dairy unit, working with schools and experts to restore habitat for the native Canterbury Grass Skink.

Senior Research Technician Adam Benton installing rhizotrons to study how pasture management above ground affects root growth and pasture persistence.

The Plantain Potency and Practice Programme team, including scientists, key stakeholders and partner farmers.

Plantain partner farmers share their experiences of using plantain at the annual Plantain Programme Conference.

Brunch with us, in partnership with Rural Support Trust, ran 40+ events across the upper North Island with 20–100 attendees per location.

Sustainability vital to keep New Zealand dairy ahead

The key to sustaining profit-ability and competitiveness lies in productivity – choosing the right inputs, adopting new technologies, and adapting sustainable practices without compromising production.

Mario Fernandez
DairyNZ principal economist

The dairy sector's footprint is steadily improving, with measurable gains in nutrient efficiency and a clear picture of the challenges ahead.

These improvements are crucial to remaining one of the most cost-efficient milk producers in the world, keeping New Zealand competitive and able to demand a premium for its products.

One of the most positive shifts has been in purchased nitrogen surplus (PNS). Over recent years, farmers have steadily improved nutrient use, driven by the nitrogen cap, regional policies in places like Canterbury and Southland, and ongoing refinements on-farm. The result is a consistent downward trend in nitrogen surplus across the sector (*see figure 1*).

Methane remains a tougher challenge. Because greenhouse gas (GHG) emissions are closely tied to the amount of dry matter eaten, most reductions in total methane per hectare have come at the expense of production.

We stay competitive among pasture-based countries by using low-footprint feed that lifts milk production while lowering emissions intensity.

Breaking this link between feed eaten and methane produced will require new practices and technologies that cut emissions without compromising productivity.

Access to low-footprint feed has already helped farmers achieve strong milk production with relatively low emissions intensity.

Protecting and building on this advantage will be vital as international expectations around emissions and sustainability continue to rise.

Sustainable practices mean being able to adapt. Whether it's developing an environmental plan, building a wetland, or managing nitrogen losses, New Zealand farmers can tackle these challenges while keeping their farms productive.

The economic case for dairy remains robust. Returns to dairy farmers significantly outperform those available in other large land-use sectors nationwide. When measured over a 40-year timeframe, dairy shows higher median returns per hectare than forestry, sheep and beef, or horticulture.

Importantly, this superior performance holds even when realistic emissions pricing scenarios are factored in. This means there is every economic incentive for existing dairy farmers to stay in dairy.

> ***"The economic case for dairy remains robust. Returns to dairy farmers significantly outperform those available in other large land-use sectors nationwide.***

Competitiveness also plays out at the national level, as dairy enterprises continue to secure land, labour and capital ahead of other sectors.

Sustainability gains, such as improved nitrogen efficiency, show that profitability, productivity and environmental performance can go hand in hand.

The next step is tackling the methane challenge – finding practical ways to cut emissions without losing production gains. DairyNZ researchers are working alongside farmers through the Reduced GHG Emissions programme to explore these options. Progress here will help keep New Zealand dairy competitive and valued on the world stage.

Figure 1: Dairy farm relative purchased nitrogen surplus and methane per hectare