

# INSIDE DAIRY

Your levy in action

## On the same page

Forging strong business partnerships



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DairyNZ 



# OVER THE FENCE...

I think this season has been one of the most extraordinary.

Most of you will agree that it's been a strong one for dairy. We came into the season as essential workers and are ending on a reasonable high, with strong milk prices and a summer that's side-stepped drought.

Many of you will be mulling over next season and thinking: 'How can I manage the challenges ahead?' On the horizon for our sector:

- Maintaining strong businesses while reducing footprint
- Meeting our climate change commitments
- Attracting and keeping strong farm teams
- The new freshwater regulations.

Lifting profitability while reducing footprint is the ultimate goal for our sector. For this reason, you'll continue to hear about our Step Change programme – it's been created to help you reduce your farm footprint and lift profit.

Step Change is one way DairyNZ aims to make sure you get what you need from us. We have a new strategy that determines how we deliver a better future for farmers. Read more about this on page two.

With the new season about to start, we've focused this edition of *Inside Dairy* on helping you set up for a strong year.

Many of you will be entering new business partnerships, and our cover story looks at how to make these work. Thanks to farm owners David and Lesley Jensen, and their contract milkers Reece and Natasha Cox, for sharing some excellent practical advice on how they've forged a strong relationship.

This month, we also have our Farmers' Forum event on in Hamilton, with a separate livestreamed event in Invercargill on the same day. See page 14 for details. I hope to see many of you there.

In late March we submitted on the Climate Change Commission recommendations. Our technical team did significant research to understand the recommendations and, most importantly, if the goals are doable. Read about our submission at [dairynz.co.nz/climate](http://dairynz.co.nz/climate). Climate change policy will be ongoing this year and we'll keep you posted on developments.

I'm always grateful for your feedback, so please email me at [tim.mackle@ceo.dairynz.co.nz](mailto:tim.mackle@ceo.dairynz.co.nz)

**Tim Mackle**  
Chief executive  
DairyNZ

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#### Your plan for the new season

As part of this edition's tools and tips for the coming season, here's a handy action planner to pull out, fill in, and stick on your wall.



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#### Living below the FEI threshold

Is it possible to reduce the impact of the fat evaluation index grading system, while increasing your profit?



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*Inside Dairy* is the official magazine of DairyNZ Ltd. It is circulated among all New Zealand dairy farmers, and sector organisations and professionals.

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Trust, communication, and boundary-setting have helped Bay of Plenty farm owners David and Lesley Jensen and their contract milkers Reece and Natasha Cox build a thriving partnership.



**1. Gauging opportunities**   
Autumn is the ideal time to take stock of the last season and develop goals, targets, focus areas and action plans for the 2021/22 season. See how you're tracking and identify areas to focus on with DairyNZ's online Farm Gauge tool – [dairynz.co.nz/farm-gauge](https://dairynz.co.nz/farm-gauge)

**2. Calving clean-up**  
Start getting your calf sheds cleaned up and ready to go. Remove old bedding now so sheds have plenty of time to air out before you add clean, dry bedding for new arrivals. Get more advice at [dairynz.co.nz/calf-housing](https://dairynz.co.nz/calf-housing)

**3. Effluent poster**   
Don't let poor effluent management create issues for your farm business and its environment. Our Effluent Management Plan poster will help you and your team to plan and implement good practices on-farm. Visit [dairynz.co.nz/effluent](https://dairynz.co.nz/effluent) to order your poster today.

**4. Transitioning onto crop**  
The key to good results during transition is ensuring all cows have equal access to the crop. To assist with transition, run the cows on and off the crop onto an adjacent grass paddock during the transition period. Learn more at [dairynz.co.nz/fodder-beet](https://dairynz.co.nz/fodder-beet)

**5. Keep them moving**   
Moving stock by truck or on foot puts extra demand on their magnesium and calcium levels. To keep cows calm and on their feet, supplement them with magnesium before moving. Extra calcium for lactating cows will help minimise their risk of milk fever too. Visit [dairynz.co.nz/transport](https://dairynz.co.nz/transport)

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#### We appreciate your feedback

Email [insidedairy@dairynz.co.nz](mailto:insidedairy@dairynz.co.nz) or call us on 0800 4 DairyNZ (0800 4 324 7969).



To find out how to recycle the plastic wrap used to protect this magazine during postage, visit [dairynz.co.nz/insidedairy](https://dairynz.co.nz/insidedairy)

# STRATEGY ANCHORS YOUR FUTURE



You've told us in our 2019 farmer roadshows and during last year's levy campaign that we need to focus our efforts on the big challenges, and better demonstrate the value of the levy you're paying. So, we've refreshed our strategy to focus on the things that matter to you.

1

## INCREASE PROFIT & REDUCE ENVIRONMENTAL FOOTPRINT WHILE CARING FOR ANIMALS ON-FARM

We're working with you to improve your profitability while reducing your footprint, and improving on your already world-leading animal care. This will not only help to meet environmental regulations and protect our natural resources and on-farm animals, but also meet consumer demand for sustainably produced food.

For example, through our Step Change project, we're working alongside farmers to help them make changes to practices within their existing farm systems. These changes will help you adapt to Essential Freshwater and climate change regulations.



2

## DEVELOP COMPETITIVE, RESPONSIBLE AND RESILIENT FUTURE FARM SYSTEMS AND SECTOR-SCALE SOLUTIONS

It's crucial that we're preparing the dairy sector and individual farms for the future, with new solutions and science to ensure long-term sustainability.

Our Forages for Reduced Nitrate Leaching Programme (2013 to 2019) was a cross-sector initiative which provided new scientific knowledge, tools and technologies for forage production. These could potentially add up to a more than 20% reduction in nitrate leaching from dairy, arable, sheep and beef and mixed-farming systems.

Farmer feedback shaped the programme along the way – a critical factor in its success. FRNL is now providing a foundation for ongoing research.





### 3

## BUILD CAPABILITY OF PEOPLE ON-FARM

Attracting and retaining a world-class dairy workforce has never been more important. We're making it easier and more appealing for school leavers and career-changers to enter dairying. We're also working with the Government to ensure you have access to skilled migrant workers.

One example of our work in this area is the Good Boss project, which also involves Federated Farmers, the Dairy Women's Network and NZ Young Farmers. Through Good Boss, we're working with farmers to create better workplaces, recruit and retain the right staff, and give new team members the best start possible.

### 4

## ENGAGE AND PARTNER BETTER WITH LEVY-PAYERS

We know you want us to focus our efforts on the big challenges, ensure our services are relevant and accessible, and spend more time listening to you. That's something we're working on.

We're also improving how we show you the value of your levy – both to your farm and the wider sector.

We're doing this by reviewing our programmes to make sure we're focused on the right things, and how we deliver our services to you. We know we you're busy and want information, tools and training that's at your fingertips. So, we're looking at how we can improve our website and how we offer events, training and support via our regional teams. We're working through this now and we'll share more information soon.



### 5

## BUILD TRUST AND PRIDE IN DAIRY FARMING

Public perception is one of the biggest challenges facing the dairy sector, so we want to make sure Kiwis know you're the world's most sustainable farmers.

We're doing this through our school education programme and school farm visits. Meanwhile, Our Vision is Clear (VIC) campaign encourages all New Zealanders to join us in improving water quality. The campaign also shares inspiring stories and videos about farmers' sustainability efforts.

In our latest public perception survey of 800 people, nearly a quarter had heard or seen the VIC campaign: 73% percent felt positive towards our dairy farmers, and 62% felt positive towards our sector.



# Working in harmony

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*Lesley Jensen says one of the nice things about employing contractor milkers, like Reece and Natasha Cox, is seeing them progress in the sector. (Left to right: David Jensen, Reece Cox with Addison, Lesley Jensen, Natasha Cox with Cobie).*

Whether you're employing a contract milker, or becoming one, it's important to go in with your eyes wide open. Bay of Plenty farm owners David and Lesley Jensen, and their fifth-season contract milkers Reece and Natasha Cox, have figured out how to make their relationship not only work – but flourish.



It was finding a way out of the dairy to pursue off-farm interests that led David and Lesley to employ contract milkers.

“About 15 years ago two things happened,” explains David. “Lesley and I ended up working off-farm and we bought a kiwifruit orchard as well, so we needed to spend more time away.”

David has governance roles in several organisations, and Lesley is a community magistrate and chair of a charitable foundation. The couple decided the best way forward was to let someone else run the day-to-day operations on their 720-cow farm in the Tauranga hills.

Their options were to appoint a farm manager, which would have meant they still had to employ people, or to take on a variable order sharemilker (VOSM). But if a low milk price year and a low production year coincided, a VOSM could get wiped out, says David.



*Reece and David agree that honest, open communication is key to a successful working relationship.*

Dairy assistant Keegan Blennerhassett is in his first year on the farm, and has entered this year's NZ Dairy Industry Awards in the trainee category.



“Our view was that we should share some of the big risk elements. And if I was being truthful, I didn’t want to be the one getting a phone call at 5am saying someone had slept in.

“I said I’d milk for 10 years – I did it for 12. These considerations are what led us to choose contract milking, and that’s where we’ve been ever since.”

The Jensens have been employing contract milkers since, and Lesley says one of the nice things has been seeing their former contract milkers progress in the sector.

“Our business has grown, but it’s good to see young people’s businesses grow too.”

### **Selection process**

To find contract milkers, David and Lesley use a rural employment agency because they don’t employ people often (three times in 15 years), so there’s a risk of losing touch with the employment process. They also feel that a third party provides balance and a professional framework.

Armed with a shortlist of likely candidates, David

and Lesley get involved in the interviewing process and visit potential applicants on the farms where they’re working.

Their current contract milkers, Reece and Natasha Cox, thought this was a great idea.

“It was good to show David and Lesley what we were doing,” says Reece.

He suggests it would have been useful to have had a rough idea of the contract price earlier in the process, although David says this isn’t what the recruitment consultant had recommended.

“However, with the benefit of hindsight, I think we would give an indication of the contract price earlier in the process,” says David.

### **Pricing it up**

David says that, when they employ contract milkers, they don’t start at a set \$/kg MS because each contract milking position is different.

“Every farm and season will have variations, so it’s important to be realistic and re-adjust from time to time.”



**“ Our business has grown, but it’s good to see young people’s businesses grow too. ”**



The Jensens work through a budget scenario, taking a view on what a fair remuneration is for someone milking 720 cows once a day (including their drawings, estimated tax obligations, and an allowance for the extra risk taken on by a contract milker).

From here, they add back in the operating expenses the contract milker will likely pay (shed costs, wages, electricity etc.). This is then divided by an estimated number of milksolids for the season (e.g., an average of the last three seasons) to arrive at a suitable \$/kg MS to pay the contract milker.

“We also provide a payment for well-reared replacement calves, and use our recruitment consultant to test whether it’s reasonable. We want to be sure our contract milkers are being well remunerated,” says David.

Reece says there’s no straightforward ‘you get paid x’ as a contract milker, because there are other factors involved.

“For example, we rear the surplus calves, so that’s an added incentive. Every contract is different.”

David says a contract is prescriptive at the

## Farm Facts

### OWNERS:

David & Lesley Jensen

### CONTRACT MILKERS:

Reece & Natasha Cox

### LOCATION:

Tauranga hills

### HERD SIZE:

720 Kiwi-Cross (all season OAD)

### FARM SIZE:

240ha (effective) + 40ha in pines + 20ha native bush

### PRODUCTION:

Approx. 240,000kg MS (OAD since 2017/18)



*Reece and Tash are focused on their goals: to go sharemilking on 600+ cows within the next three seasons, and purchase their own farm within 10 years.*

beginning, because of contract obligations and because you don't know each other. But as time goes by, a huge chunk of the working relationship is based on trust.

"Very quickly, we were satisfied the cows were being well looked after, the recording was being attended to, and the farm staff were happy and productive. Both Lesley and I gained confidence we could be away from the farm and the district for long periods without fretting about things on the farm," says David.

Reece and Natasha are the Jensens' third set of contract milkers, and the coming season will be their fifth on the farm. Reece was formerly managing a dairy farm in Taupo.

### David and Lesley's tips for owners

- 1.** Communication is key. Have regular governance meetings.
- 2.** Try not to sweat the small stuff.
- 3.** Understand that you must step away from much of the the day-to-day decision-making.
- 4.** Back out once everyone's familiar with the systems.
- 5.** Trust the people you've brought in to do their job.

### Stepping back

David says, as an owner, it's necessary to take a step back from the day-to-day management and let the contract milker get on with it. But this is more difficult to do if you're living on-farm or not knee-deep in other projects.

"You have to find a way around it, and our solution was to move, and to become fully distracted in other activities."

Reece agrees. "To be fair, we preferred a role where the owners didn't live on-farm, as it can be difficult to define the line between self-employment and management."

Reece and Natasha employ two full-time staff, and have hours-based casuals: a calf-rearer and a relief milker/weed sprayer.

The couple are responsible for some shed-related running costs, like rubberwear, power and chemicals, plus small machinery, like motorbikes. David and Lesley look after animal health, plant costs, the tractor, and capital expenditure.

The owners pay all fertiliser costs and almost all the feed costs.

"We run a small in-shed feeding system to save spreading minerals on the paddocks in spring (it's less labour intensive and safer)," says David. "Reece and Natasha pay 20% of this cost. All other feed costs are borne by us."

### Taking the plunge

Reece says it's a big step moving from management to self-employment, and the process is not without its challenges.

"Coming from a management role and already understanding the business side of dairy farming certainly helped us. Being good at budgeting and having an established working relationship with our accountant and bank manager helped us too, because they knew us before we decided to go contract milking and they helped us to structure and set up our business,"



**“ It’s important to invest in a good farm team. ”**

*Clockwise from top left: David and Reece chew the fat at a Monday morning get-together; growing up on the farm are Reece and Natasha’s children Addison (3) and Cobie (6 months); Reece with his 2IC, Brad Wilson, who’s in his second season on the farm.*

says Reece.

Natasha says having the support of your partner is crucial.

"When Reece was managing, I had nothing to do with the farm, so coming here was a big move for me too, because I got more involved. It's a huge lifestyle change in some ways, especially if you've been in a 9 to 5, Monday to Friday role with weekends off."

Reece says the biggest challenge they faced was getting to know the farm.

"In my view, it takes a good two to three years to get into the flow. You've got things like water, climate, soils, and different farm systems. All these elements are challenging, and it's been a big learning curve."

The couple say they've continued to grow by getting involved in Primary ITO study, DairyNZ discussion groups, and the NZ Dairy Industry Awards.

"That's allowed us to expand our knowledge and network, benchmark our business, and set realistic goals. This has given us a good insight to where our business will be in the next 10 years and what we need to do to get there."

## Monitoring cashflow

Reece says it's important for first-time contract milkers to give careful thought to cashflow, because there's no tangible income for the first few months.

"This is a big change, especially if you're coming from a management role where you've been paid a regular salary."

Natasha says she and Reece were in a good financial position when they started contract milking. They had equity off-farm, while her ongoing work as a teacher provided (and still does provide) regular cashflow.

"You're going into a job knowing you're not going to be paid for three to four months, and staff wages have to be paid during that period, so you need savings to cover it or to have made arrangements with your bank.

"It can be a temptation in the first year, when you've got a gap in income, to pay less wages. But investing in good staff at the beginning pays off in the long run."

David says, from an owners' point of view, it's important to have a broad understanding of the incoming contract milkers' financial strength.



*Brad at work in the 50-bail rotary, which has Protrack, LIC heat detection, and automatic cup removers.*



*Reece and Tash say a farm is a great place to bring up children. "You just can't beat it. Especially now with Addison – she'll happily spend the whole day on the farm 'working' with dad. We feel very privileged we get the opportunity to do it."*

“Otherwise, you’re going to end up in a situation in July where they can’t pay the wages, or they’re cutting corners by not having enough people, trying to do too much themselves. When calving comes along, they get hammered.”

David says cashflow and tax planning are important for both parties because there are implications for each.

“The tax implications of being self-employed often don’t become apparent until year two. I’m aware of several examples where contract milkers have gone out spending in year one; when the tax bills start rolling in in year two, it can get really tough.”

### Still learning

The business partners’ plans for the coming season include an upgrade to the effluent system, felling some pines, and possibly milking a few more cows.

“We’re still trying to establish what once-a-day is capable of,” says David.

Both couples say they’ve established a friendly and candid working relationship, where regular communication is key.

“I look forward to coming to our Monday morning governance meetings, and that’s a big thing, when you look forward to sitting down with your contract milkers,” says Lesley.

Reece says it’s been a learning curve for him and Natasha.

“But if we need support, David and Lesley have always been willing to chat and they’re just a phone call away.”

## Reece and Natasha’s tips for contract milkers

- 1.** Understand the contract milking structure. Compare it with other options to see if it’ll help you to achieve your goals.
- 2.** Upskill yourself, because you’re starting a business.
- 3.** Learn all you can about budgets and financial management.
- 4.** Build a good working relationship with the farm owners.
- 5.** Invest in a good farm team.



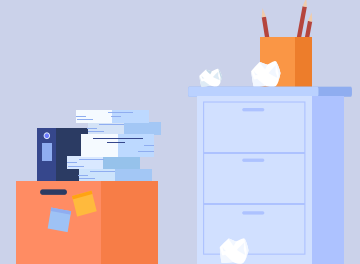
For more details on contract milking – [dairynz.co.nz/milking-agreements](http://dairynz.co.nz/milking-agreements)

Federated Farmers also has great employment resources – [fedfarm.org.nz](http://fedfarm.org.nz)



# CONTRACT MILKING: GETTING A HEAD START

First year of contract milking? DairyNZ senior business specialist Sarah Brown shares some advice on how to hit the ground running and keep stress to a minimum.



Starting as a contract milker is your first exploration into business ownership. It's an exciting time, but it can also be daunting, because you're now the main decision-maker. To help you succeed in your first year, we've outlined some key activities, skills and responsibilities.

## Strategy

Creating a vision and goals for your first season as a contract milker will help you stay on track. Remember to write these down and share them with your farm team and rural professionals so you're all working towards the same goal.

Another important conversation to have is about the best structure for your business. Discuss this with your rural professionals, as it can have tax and legal advantages or implications.

## Money management

While this may not be everyone's favourite area, it's hands-down one of the most important. Budgeting for the season ahead, and for different scenarios, removes some of the risk and uncertainty from your business.

When creating budgets, be conservative by leaving a bit of fat in the system in case any unexpected expenses pop up. Track your budgeted monthly expenditure (cashflow) against your actual spending.

Your farm budget is not the only expenditure you need to keep an eye on. Personal budgeting and monitoring your drawings will stop you spending more than the business generates. It'll also protect the cash surplus available for investment.

Tips for managing finances in your first year:

- There's generally no milk income for the first few months of the season, so put some savings aside in advance or organise an overdraft with your bank.
- Talk to your accountant about your tax obligations. If you have employees, ask them for guidance on how to pay them correctly (PAYE, KiwiSaver).

## Communication & teamwork

Keep communication lines open with the farm owner, staff, and rural professionals. Send your budgets to your bank manager and accountant, and get them on board with your plans for the season.



*Contract milkers can set their first season's direction by creating a vision and writing down goals.*



*Having clear policies and procedures ensures the team is aware of expectations, so people (and cows) stay on track.*

Share your strategy with your farm team, and prioritise weekly meetings to track how you're progressing towards your season's targets. This will make the season run more smoothly, encourage an open team environment, and strengthen relationships with those stakeholders who help your business succeed.

Having clear policies and procedures relating to all matters, from milking procedures in the farm dairy to managing environmental requirements, ensures the team is aware of expectations.

## Leadership

Whether you're sole charge or have employees, maintaining standards and leading from the front will show the level of professionalism you expect from those connected to your business. This is where having a strong team of trusted professionals and staff around you will help drive your business towards success by drawing off each other's range of knowledge and skills.

For example, have you thought of all the ins and outs of employing staff? The rosters, time off, valid employment agreements, timesheets and training/upskilling of staff? It's a lot to consider on your own, but drawing on your support team's knowledge will ensure you stick to guidelines and run a compliant business.

Being a good boss will help ensure you reach your financial targets, enjoy your day job, and allow for a healthy work-life balance.

For more help in your first year of contract milking, check out [dairynz.co.nz/business/setting-up-for-success](https://dairynz.co.nz/business/setting-up-for-success) or contact your local DairyNZ consulting officer (see page 29).



## LIZZY'S ADVICE

Hi, I'm Lizzy Moore, a South Waikato farm owner and DairyNZ consulting officer. Here's my advice for people coming through the dairy sector:



**Build a team around you.** Make sure you have a great relationship with your accountant, bank manager, vet, and farm consultant. We had little farming experience when we started, but we had a plan. You don't need to know everything, but you need trusted advisers.



**Understand a budget and make a business plan.** If you need help with these things, contact your local DairyNZ consulting officer. Get educated – DairyNZ and Primary ITO have some great courses and workshops in this space. If you go to the bank with a plan and a budget that works, the bank is 10 times more likely to want to back you.



**Build a reputation.** The biggest hurdle in our sector is finding the opportunity. So, how do you make yourself stand out from the rest? Get yourself known by entering industry awards, attending some industry events, and/or joining NZ Young Farmers. Also, take care of your relationships and watch what you say on social media. The dairy industry is a very small place. You never know how people are connected or where your next opportunity might come from.



**Think carefully about what you're investing in.** Utes don't buy cows, but cows buy utes.



**Have goals, write them down and don't give up.** Farming is hard work but it's super rewarding.

# Keeping our spot at the top

For Kiwi dairy farmers to continue leading the world, we need practical solutions and insight into future change. Farmers’ Forum 2021 has both – and is an exciting mix of great speakers, interactive workshops, livestream events and webinars for farmers nationwide.

If you’re into ‘Sustaining Success’ on your farm, you’re in luck. That’s the theme of DairyNZ Farmers’ Forum 2021 in Hamilton.

Our main event on Thursday, April 29 features three excellent keynote speakers: leading New Zealand economist Cameron Bagrie; nanotechnologist, best-selling author and television presenter, Michelle Dickinson (aka ‘Nanogirl’); and Roger Lincoln, DairyNZ’s principal policy advisor.

On that date, Southland farmers will be able to attend a Farmers’ Forum event in Invercargill, including a livestream of the keynote speakers, and topical local discussions.

Then, in May, all farmers nationwide will be able to join two interactive webinars, which will showcase the event’s economic insights and scientific solutions.



29 | APRIL  
HAMILTON

20  
21

## Sustaining success – strategies for NZ dairy farmers to continue leading the world

**When:** Thursday, April 29, 9am to 5pm

**Where:** Claudelands Event Centre, Hamilton

**Plus:** Keynote speakers livestreamed to an event in Southland, and two follow-up webinars in May

*Farmers’ Forum and associated events are free for levy-paying farmers and their staff.*

## SPEAKING OUT

### Our keynote speakers:



Cameron Bagrie will be providing an overview of current and developing economic trends, focusing on how these will affect farmers.



Dr Michelle Dickinson will discuss the role of innovation, science and technology in meeting the challenges we face and creating practical solutions.



Climate change opportunities and challenges will be the focus of an interactive session facilitated by Roger Lincoln.

## WORKSHOPS AND NATIONWIDE WEBINARS

Farmers at the Hamilton conference can join in a discussion at two of eight workshops. Workshop topics cover the latest science, environmental change, genetic improvement, business skills, learning styles, and more.

### Webinar one – Thursday, May 6, 7pm to 8pm

DairyNZ’s Economics Team shares insights into improving financial resilience and the global competitiveness of New Zealand’s dairy sector. How can we adapt to ensure we continue leading the world?

### Webinar two – Thursday, May 13, 7pm to 8pm

Join DairyNZ’s Science Team for a discussion on the latest science-based solutions to farming challenges.

Don’t miss your chance to attend – register now at [DAIRYNZ.CO.NZ/FARMERSFORUM](https://DAIRYNZ.CO.NZ/FARMERSFORUM)





Little changes lead to extraordinary results

# YOUR PLAN FOR THE NEW SEASON

Preparing for the new season can be daunting – where do you start? Here are a few ideas to get you going and keep you on the right track.

Setting up well for next season improves your chances of business success. Achieving targets such as pasture cover, cow condition, drying off date, a full complement of staff, quality infrastructure, benchmarking, and budgeting is essential – doing these well means you'll get the best from your business.

We all know it's important to have written goals, to spend time planning, and to work out what we want to achieve and how we'll get it done. So, why don't we do it? Perhaps it seems too hard, we haven't enough time, or don't know how to get started.

## Map it out

To help you with this, we've put together a farm action map (see the following pages), which you can personalise to your farm. This will prompt you and the team to think about the key things you need to do, so you're ready once calves start arriving.

There's an example to guide you in each area – e.g., calf shed, grazing management, planning – but don't be limited to these examples. Think about what you need to have/do/get sorted in each area before the season kicks off, and then make a list of how you're going to make that happen. Involve the entire farm team, get agreement, and prioritise the most important things.

There are no hard and fast rules about what you should or shouldn't include. The key is to make sure the steps are meaningful to you and will help you achieve your goals. Some people like to list each mini-step, while others are content to outline the major steps.

## Keep it handy

Pull the map out, fill it in and put it somewhere you'll all see it daily. Cross off activities as you get them done – and take a moment to acknowledge what you've achieved before starting on the next task.

You may want copies for each team member, so they can document tasks on their to-do list and use them to monitor progress over the next few months.

Or, if you're more of a checklist person, download and complete our action planner template (page 18) to prioritise actions, assign responsibility, allocate timeframes, and assess your progress.

Visit [dairynz.co.nz/planning](https://dairynz.co.nz/planning) to download and print more copies or call 0800 4 DAIRYNZ and we can send some to you.

# MY ACTION PLAN

FILL IT IN,  
PULL IT OUT,  
STICK IT ON  
THE WALL

## GRAZING MANAGEMENT

Action 1 \_\_\_\_\_  
\_\_\_\_\_

Action 2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*e.g. Update feed budget with current pasture covers and supplement on hand to plan for winter/spring.*

## COW SHED/CALF SHED

Action 1 \_\_\_\_\_  
\_\_\_\_\_

Action 2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*e.g. Clean calf sheds: remove old bedding, air it out and arrange delivery of new bedding.*

## OFFICE

Action 1 \_\_\_\_\_  
\_\_\_\_\_

Action 2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

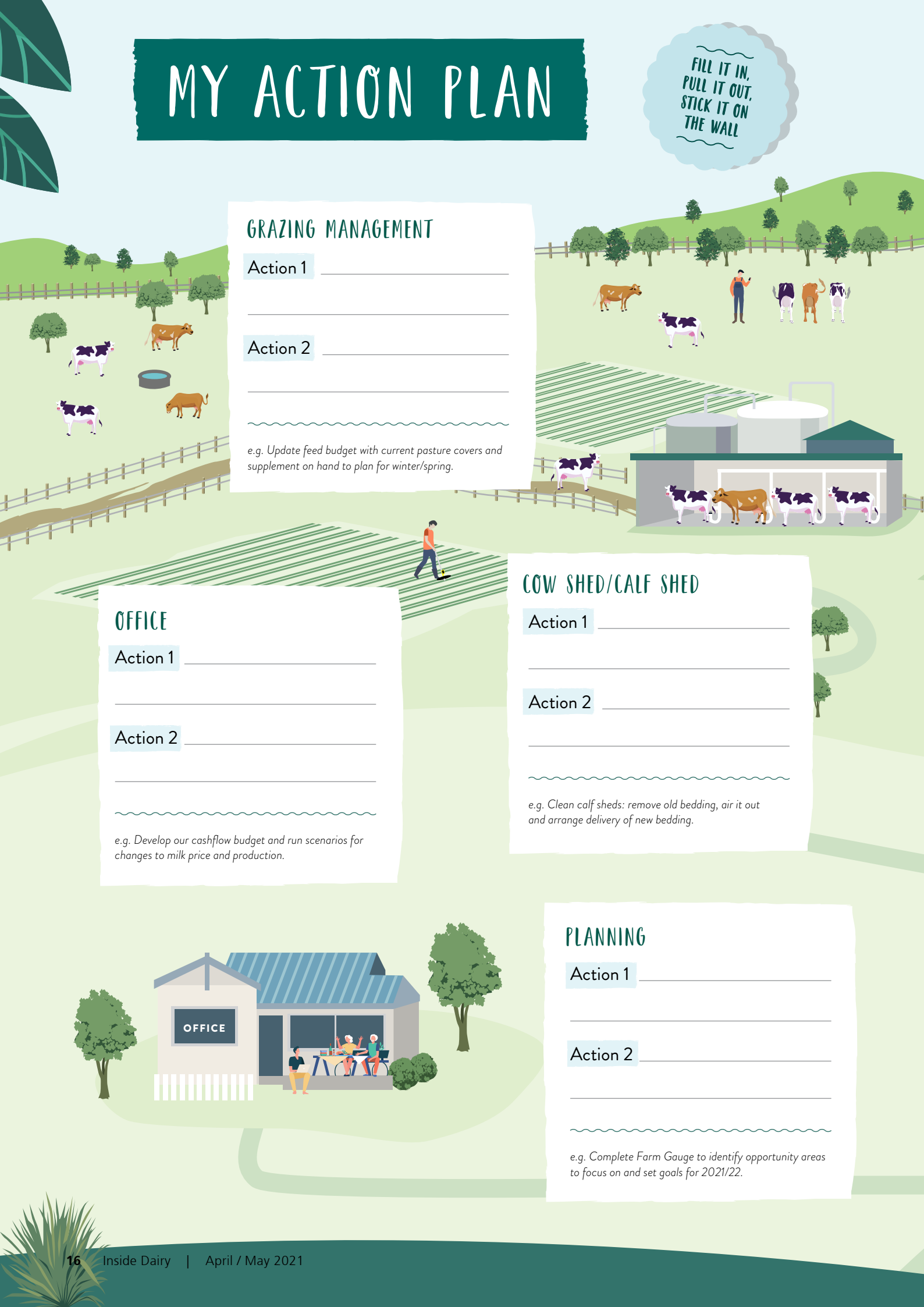
*e.g. Develop our cashflow budget and run scenarios for changes to milk price and production.*

## PLANNING

Action 1 \_\_\_\_\_  
\_\_\_\_\_

Action 2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*e.g. Complete Farm Gauge to identify opportunity areas to focus on and set goals for 2021/22.*



## STOCK

Action 1 \_\_\_\_\_

Action 2 \_\_\_\_\_

e.g. Monitor BCS and take further action to ensure cows meet condition score targets at calving.

## REPAIRS AND MAINTENANCE

Action 1 \_\_\_\_\_

Action 2 \_\_\_\_\_

e.g. Create an R&M list to tackle over the autumn.

## ENVIRONMENT

Action 1 \_\_\_\_\_

Action 2 \_\_\_\_\_

e.g. Send our relevant farm information to the dairy company for this season's environment report.

## TEAM ACCOMMODATION

Action 1 \_\_\_\_\_

Action 2 \_\_\_\_\_

e.g. Check accommodation meets the Healthy Homes standards, and arrange any maintenance needed.

## TEAM

Action 1 \_\_\_\_\_

Action 2 \_\_\_\_\_

e.g. Meet with the team to discuss the coming season's goals and targets.



# ACTION PLANNER TEMPLATE

Area of focus/goal	Action(s)	Priority* Rank 1 to 4	When	Who R = Responsible A = Assist	Done yes/no	Desired outcome achieved yes/no	Further action required

1 important, 2 important but not urgent, 3 Not important but urgent, 4 not important/not urgent

# TAKE 2 ON THE CONSUMERS' VIEW



In the last edition of *Inside Dairy*, Synlait, Miraka and Fonterra commented on consumer views and dairying's sustainability. This time around, Tatua and Open Country have their say.

## Tatua

### ▶ Paul van Boheemen, General Manager Co-operative Affairs

Tatua has operated a dairy processing business at Tatuani for more than 100 years, and is an integral part of our local community. But we also understand that we are part of a much wider community that includes customers and consumers in many countries around the world.

This understanding is embodied in our responsible farming programme, Tatua 360, which, as the name suggests, takes a wide view of the environment in which we operate, and includes elements of environmental, animal welfare, food safety, and people performance.

Our approach in responding to changing community and customer expectations is simply to ask: 'Is this the right thing to do?' While the answer is sometimes self-evident, achieving the desired change invariably requires a combination of commitment and time. To build that commitment and ensure we take all of our shareholders with us, we have a strong focus on communicating the justification for action, our performance expectations, and the tools available to support change.

As a relatively small player in the New Zealand dairy industry, we know we can't change the world on our own, but we are committed to playing our part.

## Open Country

### ▶ John Fairweather, General Manager Quality and Food Safety

Committing to continuous improvement in sustainable practices has been a key direction for Open Country. It is vital in developing longstanding relationships with our key customers, farmers and employees alike. Dairy consumers worldwide are becoming more discerning of the food value chain, and market



*Dairy companies agree that customers' and consumers' requirements are an integral part of their decision-making.*

research clearly shows that they are seeking out products that have been produced sustainably.

Open Country is developing policies and technology to reduce, reuse and recycle, and we have developed a succinct sustainability strategy, based on a review of key global client sustainability strategies and national and international drivers and initiatives.

While a recent report has shown that New Zealand farmers have the lowest carbon footprint in the world, we support our suppliers in achieving further reductions. We are passionate about our commitment to water quality and are assisting our farmers in establishing Farm Environment Plans.

As part of our greenhouse gas reduction initiatives, we are looking across the whole supply chain. The installation of an electrode boiler at Awarua, powered by 100% renewable energy, is one part of Open Country's journey towards improving environmental outcomes and delivering on consumers' expectations.

# Six partner farms, six lessons

Putting options for reducing emissions and nitrogen loss to the test on a group of farms has yielded valuable results.

In our search for ways to lower greenhouse gas (GHG) emissions and nitrogen (N) leaching, it's vital to investigate how each option works on-farm.

That's what DairyNZ has been doing through our GHG Partnership Farm project, where we completed Overseer and Farmax modelling on six farms.

We developed case studies on the farms to demonstrate potential mitigation options, while exploring the effect of those options on profitability and productivity. These six farms were selected to ensure representative and robust farm system data and modelling.

The mitigation options modelled fell into three categories: farm management changes to the current farm system, infrastructure investment and changes, and retiring lower productive areas of the farm and planting in trees.



*One of the partner farms is Tokoroa Pastoral, which modelled five different scenarios, including removing all imported supplement from the farm system.*

## Here's what we learned

- 1. One size does not fit all.** Mitigation options need to be farm-specific. There are opportunities currently available on some farms to improve profit and reduce emissions through good management practices; however, there's no 'one-size-fits-all' package that every farmer can use.
- 2. Small reductions can be made.** There's a high correlation between reducing N loss and emissions. Lower N surplus will reduce feed imported/harvested, which reduces methane. Options to reduce methane are closely related to total dry matter intake. Incremental environmental gains in emissions and nutrient loss can be achieved, and are still important for long-term progress.
- 3. Understanding your starting position makes a difference.** Depending on the farm system and how efficient it is at the start, determines the mitigation options available and their cost. Some farms can reduce environmental losses and improve profitability through farm system change. Other farms don't have this opportunity because they're already very efficient.
- 4. Some mitigations increased emissions.** Some mitigations resulted in conflicting environmental outcomes. This was mainly around infrastructure where reduced N loss, through less time spent on paddock, could lead to increased emissions from greater supplement intake.
- 5. Good farm data is important.** A solid understanding of the farm, the people involved, and the farm system, is important at the start of the process. Modelling farm system options for reducing both N loss and GHG emissions is complex. It requires a lot of information about the farm to accurately represent the farm system.
- 6. Accurate modelling is key.** A deep understanding of how to model environmental mitigations, and the effect on the farm system, production, and profitability, is needed. Training of rural professionals to provide consistent guidance, information, and modelling is a critical component, because it ensures accuracy for any farmer looking to make changes.

To learn more about the changes modelled, and the results, go to [dairynz.co.nz/GHGfarms](https://dairynz.co.nz/GHGfarms)



*Bay of Plenty dairy farmer Fraser McGougan is the new Climate Change Ambassadors chair.*

# CHAMPIONS FOR CLIMATE WORK

**With a new leader and five new members, DairyNZ's team of Climate Change Ambassadors are ready to help farmers rise to the challenge.**

Climate Change Ambassadors are leaders for climate change action on dairy farms. They help communicate the challenges and opportunities dairy farmers face in playing their part to address climate change, alongside the rest of New Zealand.

"The 13 ambassadors are leading dairy farmers who run their farms sustainably and profitably, while being committed to reducing on-farm greenhouse gas emissions," says DairyNZ strategy and investment leader Dr David Burger.

"The ambassadors work to raise awareness and mobilise change for the benefit of the environment, farmers and New Zealand."

## **Taking the lead**

In January, the Climate Change Ambassadors were appointed a new leader, Bay of Plenty dairy farmer Fraser McGougan.

Fraser, from Whakatane, has been a Climate Change Ambassador since 2018. He says he's looking forward to leading the ambassadors to engage with farmers, communities and decision-makers, and to provide a farmer voice at national level.

"Farmers want to be part of the climate change solution," he says. "Our role as Climate Change Ambassadors includes helping farmers understand the changes they can make on their farm to reduce emissions and improve water quality, while maintaining or even increasing profitability."

Fraser says now is a critical time in the national conversation about emissions reductions, with the Climate Change Commission announcing draft carbon budgets (in January 2021) on how New Zealand can meet its obligations.

Research by AgResearch has confirmed New Zealand dairy is

already the world's lowest emissions producer of milk.

"But there's more to be done to maintain our competitive advantage and do the right thing by the environment and New Zealanders," says Fraser.

## **Walking the walk**

Fraser is a fourth-generation farmer – Willowvale Farm has been in the McGougan family for 120 years. He and his wife Katherine, with their children, Emily, Isaac and Liam, have 430 cows on 143ha.

Among a number of awards, the couple won the Bay of Plenty Ballance Farm Environment Awards Supreme Award in 2019. They've fenced all their waterways, matched their stocking rate to what the land can sustainably carry, and decreased their imported feed.

## **New ambassadors**

The Climate Change Ambassadors group was created by DairyNZ in 2018 under the Dairy Action for Climate Change. New members have been appointed this year to maintain the group's diversity, with a mix of locations, farm systems and experience.

The five new ambassadors appointed are: Waikato farmers Graeme Barr and Melissa Slattery (Dairy Environment Leaders chair), Southland farmer Steve Smith, and Canterbury farmers Ash-leigh Campbell and Phill Everest.

Find out more about the ambassadors at [dairynz.co.nz/CCA](https://dairynz.co.nz/CCA)

# Breeding Worth changes ahead



Major updates to genetic evaluations will make it even easier for farmers to increase their herd profitability, explains New Zealand Animal Evaluation's Brian Wickham.

To provide farmers with the best tools for making informed breeding decisions, New Zealand Animal Evaluation (NZAE) is making enhancements to the economic values used in Breeding Worth (BW).

What are economic values (EVs)? Well, there are currently eight traits in the BW identified as having a measurable economic value: Milk Fat, Milk Protein, Milk Volume, Liveweight, Fertility, Residual Survival, Somatic Cell Score, and Body Condition Score.

EVs are the estimate of how valuable each trait is to New Zealand farmers. NZAE, which is a wholly owned subsidiary of DairyNZ, combines EVs with Breeding Values to calculate an animal's overall BW.

The EVs are applied on a 'profit per unit' basis. For example, one additional kilogram of protein creates \$4.26 of additional profit for a dairy farmer.

Calculations account for milk production, historical, current and forecast milk prices, income from culls, surplus cows and bobbies, the cost of generating replacements and general dairy farm expenses.

NZAE normally updates EVs every year to reflect changes in these values, which ensures the BW remains relevant.

We would normally make these changes in February of each year but this year, and in future years, any changes will be made in December. This change in timing will ensure we are better aligned with changes internationally.

We also plan to move from NZAEL2.0 to NZAEL3.0 in December 2021. This change will make the NZAEL evaluation system independent of LIC software and include some breeding value enhancements.



## Advances in fertility modelling

The biggest development, so far, has been for fertility. A new model, based on many years' research, is now operating as a prototype and we've started sharing the results with our Farmer Advisory Panel and Animal Evaluation Enrolees (bull owners).

Some features of this new model:

- It's more accurate than NZAEL 2.0 at predicting a range of fertility traits.
- It uses fertility data from seven fertility traits recorded on first-calving to fourth-calving cows.
- It delivers Breeding Values for three fertility traits, which are currently combined into a fourth.

While this development opens the way for more genetic progress in fertility, we believe we can make better use of pregnancy testing data to provide a Breeding Value for conception rate (or failure to conceive). NZAEL is making it a priority to pursue this.

## Incorporating genomic data

NZAE plans to incorporate genomic data (the genome and DNA of bulls) into the new breeding values. This will deliver more accuracy around bull and heifer selection, and increase the rate of genetic gain. Consultations and discussions with our sector partners are ongoing as we search for a national system that'll give farmers consistent, state of the art and independent genetic evaluations.

For further information, check out [dairynz.co.nz/animal-evaluation](https://dairynz.co.nz/animal-evaluation)





# System rewind reduces GHGs

These Waikato farmers just wanted to save on feed costs and get more balance back in life – but their farm system change has also reduced methane emissions while maintaining profit.

Step Change is a DairyNZ project focused on helping farmers improve farm profitability while reducing their environmental footprint. Garry and Marie-José Reymer are a great example of how this is possible for farmers. The couple bought their Cambridge farm in the early 1990s, before installing in-shed feeding in 1993 and ramping up supplement use by 2000. Within 15 years, 25% of their on-farm feed was purchased rather than homegrown.

The intensification of their farm system was typical. Back then, high-input systems were in the minority – about 13% of the sector; now, 30% of dairy farm systems are low-input.

In 2016, Garry reached a tipping point in managing the complexities and costs related to the farm’s feed and supplement purchase and use, along with the drop in milk price. The intensive system was also tying them to the farm, requiring them to make all the management decisions.

“I was feeling like a futures trader,” says Garry. “I’d lock in supplement contracts 12 to 18 months in advance, predicting next season’s milk price. In the end, the risk of getting it wrong was too high. I also worked through what the extra feed was costing the business, and the numbers weren’t stacking up.”

Garry says it’s all too easy to look at feed costs and how much more milk will be produced, without exploring all the costs associated with the feed.

“When feed use went up, so did the cow numbers. That meant higher replacement numbers and heifer grazing costs. Costs around labour, repairs and maintenance also lifted. Plus, more supplement often leads to more wasted supplement, which is difficult to measure.”

So, reducing greenhouse gases (GHGs) was not the Reymers’ motivating factor for change. However, ‘rewinding’ the farm back to a lower-input system also had the unintended but welcome benefit of reducing methane (see *Table 1*, right). Garry acknowledges that it is not as ‘exciting’ to decrease production as it is to increase it, but the lesser production better meets the family’s personal goals.

Garry says system change takes time and multiple seasons to get right – it’s not wise to rush it. Cow numbers, milk production, milksolids per cow, and supplement use are all down – but so are the farm’s methane emissions, and they’ve maintained profit.

The Reymers now have freedom to choose how they spend their time, a simpler system for their manager to run, and a business that’s better-prepared for future environmental requirements.



Garry and Marie-José Reymer.

Farm system component	2013/14 season – System 4	2017/18 season – System 2
Cows/ha	3.2	3.0
MS/ha	1521	1233
MS/cow	473	413
Pasture grown t DM/ha	18.2	20.6
Supplements t DM/ha offered	6.0	1.9
Fertiliser kg N/eff. ha	141	163
Enteric methane t CO <sub>2</sub> eq/ha	9.3	8.9
Operating profit \$/ha based on \$6.70 milk price	3460	3733



For help on making your own Step Change, visit [dairynz.co.nz/step-change](https://dairynz.co.nz/step-change)

## Feed focus from the get-go



With many farms coming under new management on June 1, here are some tips from DairyNZ feed specialist Chris Glassey

on how to set the farm up for a successful season.

### Establish feed availability

Your best opportunity to reset the farm's feed demand and supply situation is before calving starts. Don't just rely on what you've been told by the outgoing manager. Establish the current feed situation by measuring pasture covers and available supplement, and produce a feed wedge for the farm as soon as possible.

Knowing each paddock's size will help with your day-to-day grazing management decisions (owners should provide an accurate farm map with paddock areas).

### Set clear goals

Set pasture cover targets for critical times (e.g., start of calving, balance date). Next, create some realistic forecasts from your current situation towards your pasture cover targets.

To help with forecasts, use historical monthly growth data and nitrogen application records, or see DairyNZ's *Facts & Figures* guide ([dairynz.co.nz/factsandfigures](https://dairynz.co.nz/factsandfigures)).

Use tools like the Spring Rotation Planner ([dairynz.co.nz/SRP](https://dairynz.co.nz/SRP)), feed wedges and a feed budget to aid your grazing management decisions.

Establish a set of decision rules to help you achieve your goals for grazing management and supplement use. For example, 'I'll only feed supplement if post-grazing residuals drop below 1400kg DM/ha' or 'I will be on a 25-day grazing rotation at balance date'.

### Find out how much grass your farm can grow

Regular paddock assessments will help you establish this over time. In the meantime, back-calculate your pasture and crop eaten figure using historical milk production figures. To check the average (and top 10%) pasture and crop eaten per hectare in your area, use DairyNZ's Pasture Potential Tool ([dairynz.co.nz/pasture-crop-eaten](https://dairynz.co.nz/pasture-crop-eaten)).

Sign up to DairyBase ([dairynz.co.nz/DairyBase](https://dairynz.co.nz/DairyBase)) so you can benchmark your farm's pasture eaten and profit against local farms.



### Identify areas for improvements and close the gap

Throughout the season, keep good records, so you can make better decisions about stocking rate, calving date and which paddocks need improvement. Monitor and record pasture growth and tiller density to identify lower-performing paddocks.

- Are your soil pH and soil nutrients in the optimum range?
- Weeds and insect pests – what are they? What's the extent of the problem?
- What about past pugging damage, soil compaction or other limitations?

Review performance at season's end. Compare with your benchmark to identify areas to focus on next season. Also, tap into local knowledge: join a discussion group or get in touch with a farmer or technical expert for tips.

### Key points

1. Get sorted before calving starts: assess feed availability, and forecast.
2. Set decision rules and monitor your progress against targets.
3. Regularly assess pasture covers and identify your pasture potential.
4. Both farm owners and incoming contractors/managers have responsibilities for a successful transition.

Southland farm owner Joel Burns: "We might have our challenges with rain in Southland, but on the flip side, we can grow a lot of grass."

# Southern comfort for stock in winter

Successful wintering requires year-round focus to achieve good practice. Here's how DairyNZ research, workshops and advocacy are helping dairy farmers achieve this.

In the last few years, Southland farmers Joel and Linnet Burns have been fine-tuning wintering practices on their 900-cow farm near Invercargill. Last year, Joel attended a DairyNZ wintering webinar on the new rules.

"It's important to keep an open mind and to be engaged on what we can do to make improvements for better environmental outcomes," says Joel.

## Seasonal solutions

With further legislative changes to come, the Burns are aiming to keep things simple this winter, while keeping their usual back-fencing and portable water troughs approach.

"If we know bad weather is coming though, we move the stock somewhere more appropriate," says Joel. "Something we did successfully last winter was to have some crop behind a hedge where the ground was drier, so animals had food and shelter. When the weather fined up, we returned them to the normal paddocks."

Another thing Joel and Linnet have done is to work with their contractor to make changes to the cropping paddocks.

"We make sure all our crop paddocks are at relatively high points and free draining, so when it rains, the water has somewhere to go rather than stay on the paddock.

The herd is wintered off from May until early August, when the cows come home to graze on crop. This winter the Burns

are moving away from growing fodder beet and onto kale and swedes. The cows calve on a bark chip pad.

## Cultivating contractors

Southland-based David Kean, president of Rural Contractors New Zealand, has been to DairyNZ, Federated Farmers and Environment Southland workshops to better understand the management of slopes, critical source areas and waterway buffers in the region.

He says it's important that contractors know what's expected of them, and modern GPS mapping systems have made a big difference to getting things right.

"The farmer sends me a cultivation map of the paddocks showing the areas to avoid and the preferred direction of cultivation. We transmit that to our drivers, who can see it on an in-cab screen, so they have everything at their fingertips to help them get the job done with precision."

David says better communication and focus between farmers and contractors is making sure everyone's on the same page.

"We all have environmental responsibilities, and ignorance is no excuse if you have to stand up in court to defend your actions."



For insights on successful wintering, visit [dairynz.co.nz/wintering](https://dairynz.co.nz/wintering)

## Grow your governance skills

Registrations are now open for the 2021 Rural Governance Development Programme.

By taking part in this multi-day programme, you'll expand your understanding of governance disciplines, and your confidence in applying them. You'll see your business grow and meet current challenges. The programme is suitable for dairy businesses of all sizes and structures.

Courses begin in June, in Taupo and Christchurch. Secure your spot at [businesstorque.co.nz/#rg](https://businesstorque.co.nz/#rg)



Tim Mudford, former programme participant.

## Help feed struggling Kiwis

How'd you like to put some food on the table for a family in need?

Nationwide charity Meat The Need is calling on farmers to make a livestock donation that'll be processed and delivered to food banks across New Zealand.

DairyNZ is proud to support the charity, which has already seen hundreds of farmers donating to the cause.

Make a difference today by going to [meattheneed.org](https://meattheneed.org)

*By donating mince, farmers are helping primary students in Mid-Canterbury to receive a hot lunch.*



## Dairy Statistics 2019/20 now available

Check out the latest edition of *Dairy Statistics* at [dairynz.co.nz/dairystatistics](https://dairynz.co.nz/dairystatistics). This annual 'cow census' offers a range of information on production, herd improvement, farms and more.

### The value of dairying in New Zealand

Jobs in the dairy industry

**50,000 employees**

Amount of export revenue NZ earned from dairy farming (year to June 2020)

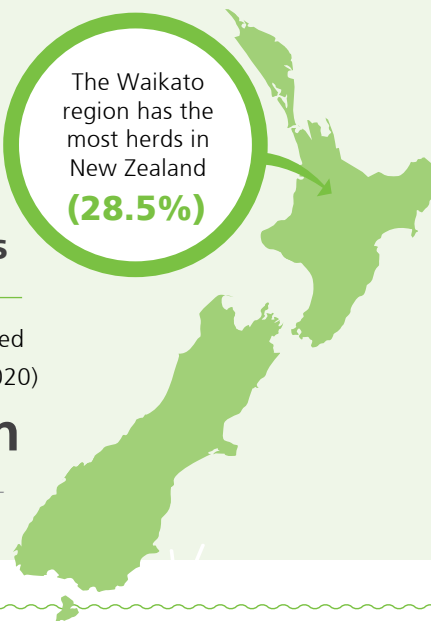
**\$NZ19.7 billion**

Source: *Dairy's economic contribution - 2020 update*, Sense Partners

The Waikato region has the most herds in New Zealand  
**(28.5%)**

**THE NORTH ISLAND HAS 71.4% of New Zealand's dairy herds**, 58% of dairy cows and produces 54% of NZ's milksolids.

**THE SOUTH ISLAND HAS 28.6% of New Zealand's dairy herds**, 42% of dairy cows and produces 45% of NZ's milksolids.



# Real change for farmers

**With nothing to hide and everything to gain, Southland’s Jon Pemberton is stoked to be part of a project that’ll benefit all farmers.**

“Being part of this project means we’re out there with our pants down and we can’t hide from the truth.”

Jon’s talking about the Communities of Practice (COP) project, which began in July 2019. Led by DairyNZ, the project is helping Otago and Southland farmers improve their water quality and reduce their emissions footprints.

That’s why Jon and wife Birgit don’t mind putting their farm in the spotlight.

“It’s okay by me, because this project is levy-funded and aimed at benefitting all farmers. We knew that when we signed up for it. I also don’t mind being in those uncomfortable spaces, as it makes you very honest,” says Jon.

## Project snapshot

DairyNZ senior scientist and COP project leader Dawn Dalley says that although the COP project is a separate initiative, it will add another dimension to ongoing Southern Dairy Hub research, by enabling calculation of the greenhouse gas footprints of the four current farm systems.

**“If this project can give people the tools, knowledge and skills they need to catch up, that’s great.”**

As well as the Pembertons’ property, there are three other monitor farms involved, in northern Southland, west Otago and Taieri. All vary in farm system, soil type and topography and each has a ‘Community of Practice’ – eight to 15 farmers and rural professionals who meet regularly.

Each farm’s whole system is analysed and alternative scenarios modelled, alongside environmental risk assessment and financial benchmarking. This aligns the COP project well with DairyNZ’s Step Change project ([dairynz.co.nz/step-change](http://dairynz.co.nz/step-change)).

## Time to get real

Dawn says the COP project will inform the framework of He Waka Eke Noa. “We’re also aiming to pinpoint any regional knowledge gaps and future research opportunities along the way.”

Farmers will be able to turn the COP project’s learnings into action on the ground once Southland has set its regional limits to



*Jon Pemberton says he was stoked to be picked as one of the COP project’s four monitor farms.*

reduce nitrogen loss. That’s the key motivator for farmers like Jon.

“Projects like this one and Step Change show farms’ real inputs and outputs,” he says. “If this project can give people the tools, knowledge and skills they need to catch up, that’s great.”

Read the full story on the Pembertons’ farm and the COP project at [dairynz.co.nz/COP](http://dairynz.co.nz/COP)

## Funding and partners

The Communities of Practice project, a component of the Participatory Research: Enhanced Research Adoption project, is part of DairyNZ’s research work with the Southern Dairy Hub. It started in July 2019 and ends in June 2022. It’s led by DairyNZ, run jointly with AgResearch, and funded by the Ministry for Primary Industries’ Sustainable Farming Fund. DairyNZ and the South Island Dairy Event are co-funders.

To find out more, contact project leader Dawn Dalley at [dawn.dalley@dairynz.co.nz](mailto:dawn.dalley@dairynz.co.nz)

# April events

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
			<b>01 WEST COAST</b> The Karamea Discussion Group meets between 10.45am and 1.00pm to discuss down cow management with DairyNZ animal care extension specialist Tony Dench. Register with Angela Leslie, 021 277 2894.			
5	6	<b>07 NORTHLAND</b> The Hukerenui Discussion Group meets at Sam Moscrip's farm between 10.30am and 1pm to discuss regional seasonal issues and challenges. Call Amy Weston, 027 807 9686.				11
12	13	14	<b>15 SOUTHLAND/SOUTH OTAGO</b> The Southland Biz Grow Progression Group 2020/21 meeting will be 7pm to 9 pm at the Salvation Army Community Hall, Winton. Contact Guy Michaels, 021 302 034.			
19	<b>BAY OF PLENTY</b> Waimana/Opotiki Discussion Group meets 11am to 1pm to look at the host farm's system, using DairyBase as a benchmarking tool. Contact Ross Bishop, 027 563 1785.		22	23	24	25
26	27	28	<b>29 CANTERBURY/NORTH OTAGO</b> Sign up for a DairyNZ Biz Start session in Ashburton and reach your goals faster. Phone Alice Reilly, 027 379 8069.			

TO SEE WHAT ELSE IS HAPPENING IN YOUR REGION DURING APRIL AND MAY, GO TO [DAIRYNZ.CO.NZ/EVENTS](https://dairynz.co.nz/events)

## NORTHLAND

The Northland region is represented by two dairy farmers in DairyNZ's Climate Change Ambassadors. Andrew Booth (Titoki) and Earle Wright (Tabora) are playing an important part in helping dairy farmers and our farming communities understand how they can make environmental improvements on their farms.

The Climate Change Ambassadors group was created by DairyNZ in 2018 under the Dairy Action for Climate Change. New members have been appointed this year to maintain the group's diversity, with a mix of locations, farm systems and experience.

Read more about Andrew, Earle, and the other ambassadors at [dairynz.co.nz/ccca](https://dairynz.co.nz/ccca). You can also read about the ambassadors in our article on page 21 of this edition.

## WAIKATO

DairyNZ's Farmers' Forum 2021 is coming to Hamilton on April 29, with a range of speakers and interactive sessions designed to help you sustain success on-farm.

Keynote speakers include leading New Zealand economist Cameron Bagrie, and nanotechnologist, best-selling author and television presenter Dr Michelle Dickinson (aka 'Nanogirl'). Workshop topics will cover the latest science, environmental change, genetic improvement, business skills, being a great boss, and more.

This event is free for levy-paying farmers and their teams – register now at [dairynz.co.nz/farmersforum](https://dairynz.co.nz/farmersforum)

Read more about the event on page 14 of this edition.

## BAY OF PLENTY

Learn about the steps to building a future-fit farm at our 'Explore your options field day' near Whakatane on April 7.

Hosted by local dairy farmer and DairyNZ Climate Change Ambassador chair Fraser McGougan, this event will help you understand the targets and direction of travel for freshwater management and emissions reductions. We'll take a look at how Fraser and wife Katherine are recycling water, waste and energy, decreasing nitrogen inputs, and using the latest technology.

Find out more at [dairynz.co.nz/events](https://dairynz.co.nz/events)

## TARANAKI

If you can't make it up State Highway 3 for the DairyNZ Farmers' Forum in Hamilton on April 29, join us online two weeks later for one of two interactive webinars that will showcase the event's economic insights and scientific solutions.

On May 6, 7pm to 8pm, DairyNZ's economics team will share insights into the competitiveness of New Zealand's dairy sector against key international competitors. How can we adapt to ensure we continue leading the world?

Then, on May 13, 7pm to 8pm, log in for a discussion with DairyNZ's science team about the latest science-based solutions to farming challenges.

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

## DairyNZ consulting officers

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

#### Northland

Regional Leader	Leo Pekar	027 211 1389
Far North	Amy Weston	027 807 9686
Lower Northland	Hamish Matthews	021 242 5719
Whangarei West	Ryan Baxter	021 809 569

#### Waikato

Regional Leader	Wilma Foster	021 246 2147
South Auckland	Mike Bramley	027 486 4344
Hauraki Plains/Coromandel	Michael Booth	021 245 8055
Te Aroha/Waihi	Euan Lock	027 293 4401
Cambridge	Lizzy Moore	021 242 2127
Hamilton	Wilma Foster	021 246 2147
Huntly/Tatuanui	Brigitte Ravera	027 288 1244
Matamata/Kereone	Frank Portegys	027 807 9685
Pirongia	Steve Canton	027 475 0918
Otorohanga/King Country	Phil Irvine	027 483 9820
Waipa South	Wilma Foster	021 246 2147

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Regional Leader	Andrew Reid	027 292 3682
Central Plateau	Colin Grainger-Allen	021 225 8345
South Waikato/Rotorua South	Angela Clarke	027 276 2675
Eastern Bay of Plenty	Ross Bishop	027 563 1785
Central Bay of Plenty	Kevin McKinley	027 288 8238

#### Taranaki

Regional Leader	Mark Laurence	027 704 5562
South Taranaki	Ashely Primrose	027 304 9823
Central Taranaki	Mark Laurence	027 704 5562
Coastal Taranaki	Mark Laurence	027 704 5562
North Taranaki	Ian Burmeister	027 593 4122

#### Lower North Island

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Wairarapa/Tararua	Abby Scott	021 244 3428
Eketahuna	Rob Brazendale	021 683 139
Hawke's Bay	Gray Beagley	021 286 4346
Northern Manawatu/Woodville	Janine Swansson	027 381 2025
Central Manawatu/Rangitikei/Whanganui	Rob Brazendale	021 683 139

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

#### Top of South Island/West Coast

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

#### Canterbury/North Otago

Regional Leader	Rachael Russell	027 261 3250
North Canterbury	Amy Chamberlain	027 243 0943
Central Canterbury	Alice Reilly	027 379 8069
Mid Canterbury	Hugh Jackson	027 513 7200
South Canterbury	Rachael Russell	027 261 3250
North Otago	Rachael Russell	027 261 3250

#### Southland/South Otago

Regional Leader	Ollie Knowles	027 226 4420
West Otago/Gore	Keely Sullivan	027 524 5890
South Otago	Guy Michaels	021 302 034
Northern/Central Southland	Nicole Cochrane	021 240 8529
Eastern Southland	Nathan Nelson	021 225 6931
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## LOWER NORTH ISLAND

Want a free pair of gumboots?

Just head along to one of seven local stores to purchase plantain seed and you'll head home with a new set of boots.

Research shows that using plantain reduces nitrate leaching, and now's the time to give it a go with your autumn sowing.

DairyNZ's keen to help Tararua farmers start using plantain, so we've made free boots available to farmers in the district.

Go to one of the following stores to take advantage of this giveaway:

- FarmSource Dannevirke and Pahiatua
- Farmlands Dannevirke and Pahiatua
- Keinzley AgVet Eketāhuna
- PGG Wrightsons Eketāhuna and Dannevirke.

## TOP OF THE SOUTH/WEST COAST

Has once-a-day or flexible milking got you curious? Or are you a convert? Then the DairyNZ National Once-A-Day Milking Conference is for you!

Coming to Nelson on May 5 and 6, the programme features an excellent line-up of guest presenters, including several dairy farmers and rural professionals. Cost for the event is \$160 + GST per person, which includes morning tea, lunch and conference dinner. The after-dinner speaker on day one is Doug Avery, and there'll be a packed lunch on-farm for day two. Go to [dairynz.co.nz/events](http://dairynz.co.nz/events) to register.

## CANTERBURY/NORTH OTAGO

DairyNZ has been working with six case study farms, including three from Canterbury, to demonstrate potential options for reducing emissions and nitrogen loss, while exploring the effect on profitability.

The three Canterbury farms involved in our Greenhouse Gas Partnership Farms Project are Flemington Farm, Tait Family Trust, and Willsden Farm.

For each of these farms, changes to the system have been modelled in Overseer and Farmax to estimate the reduction in nitrogen leached, and changes in greenhouse gas and profit.

Options tested include soil monitoring for irrigation, removing nitrogen applications, culling early, and increasing effluent area.

Check out the case studies at [dairynz.co.nz/ghg-farms](http://dairynz.co.nz/ghg-farms). Also, see our article on page 20 of this edition.



# LIVING BELOW THE FEI THRESHOLD

## 2017/18 SEASON



**Jake Jarman**  
Masters student, DairyNZ

**Is it possible to reduce the impact of the fat evaluation index grading system, while increasing profit? A two-year farm systems comparison in Taranaki set out to answer that by investigating (1) using alternative supplementary feeds to replace palm kernel expeller, and (2) focusing on a pasture-only farm system and removing palm kernel expeller entirely. This article covers the outcomes from Year 1, while the second year's research will be covered in our next issue of *Inside Dairy*.**

For farmers that supply Fonterra, the amount of palm kernel expeller (PKE) that can be fed to lactating cows is restricted by the fat evaluation index (FEI) grading scheme. As a result, there is increased farmer interest in both the use of alternative supplementary feeds, which have a smaller effect on FEI, as well as less intense farm systems, which do not require any imported supplementary feed. The research detailed below aims to answer some of the questions around these issues.

### Research overview

In Hawera, South Taranaki, Dairy Trust Taranaki (DTT)

### Key points

- Replacing PKE with maize grain and barley reduced FEI grading penalties but decreased profit because of the high cost of the supplementary feed.
- Removing PKE, reducing stocking rate and relying on PASTURE only also reduced FEI grading penalties, but also decreased profit because of a reduction in milksolids (MS) production.
- Even with large responses to supplementary feed (greater than 100g MS/kg DM), the marginal cost must be considered to ensure it is adding to profit instead of reducing profit.

compared a farmlet feeding PKE with a farmlet that replaced PKE with alternative supplementary feeds; and also a farmlet that removed PKE, reduced stocking rate and relied on PASTURE only.

The research was completed over two seasons (2017/18 and 2018/19):

- Year 1 (2017/18) – where maize grain and barley replaced PKE (*this article*).
- Year 2 (2018/19) – where a meal blend replaced PKE (*follow-up article*).

Maize grain and barley were chosen as the alternative supplementary feeds for the first season. However, due to





cost, these were swapped for a meal blend for the second season.

The farmlet comparisons were part of a larger DTT, Ministry for Primary Industries (MPI) Sustainable Farming Fund, and DairyNZ farm systems research programme titled Future Proofing Dairying in Taranaki.

### Farmlet comparisons – Year 1

At the DTT Gibson Farm in Hawera, two 24ha farmlets were stocked at 3.3 cows/ha (79 Friesian cows). Another 24ha farmlet was stocked at 3.0 cows/ha (73 Friesian cows).

- **Farmlet 1 (PKE)** offered PKE via troughs (780kg DM/cow/year) in the paddock when pasture supply was less than herd feed demand.
- **Farmlet 2 (GRAIN)** offered maize grain and barley via an in-shed feeding system (720kg DM/cow/year) when pasture supply was less than herd feed demand.
- **Farmlet 3 (PASTURE)** relied on home-grown pasture.

All farmlets (including PASTURE) also imported 100kg DM/cow of hay.

Home-grown pasture silage was harvested from each farmlet when pasture supply was greater than pasture demand, and fed back to that same farmlet to fill feed deficits.

Feed management decision rules were set for all farmlets based on feed budget and grazing management targets. No cropping occurred on any farmlet, and planned start of calving was the same between them.

### Living within the FEI

Both replacing PKE with a similar quantity of maize grain and barley, and PASTURE only, lowered the six-day rolling average FEI (Figure 1). The PKE farmlet had seven days where the six-



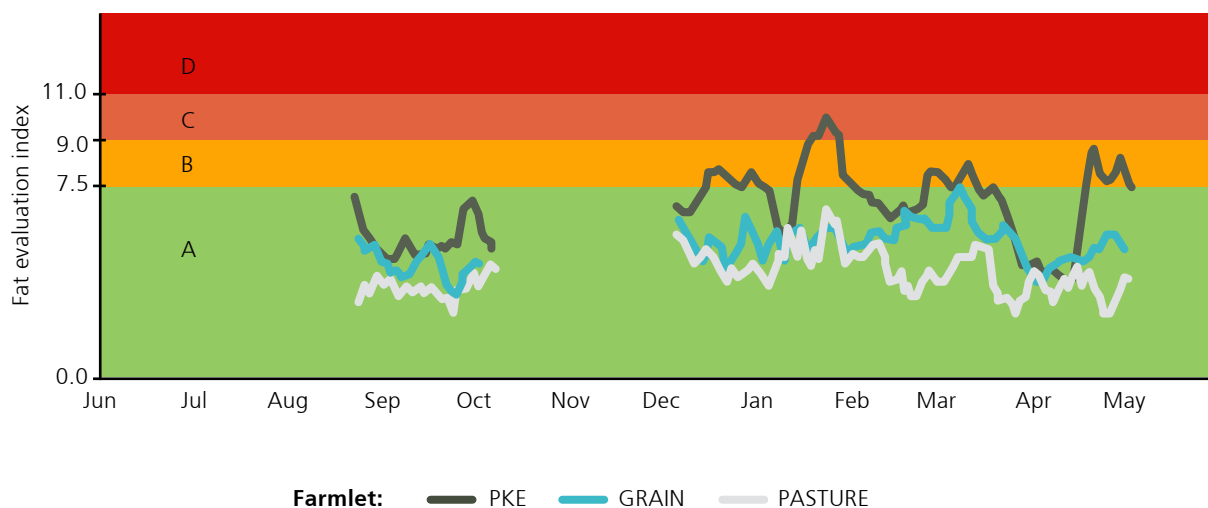
*On each farmlet, when pasture supply was greater than demand, silage was harvested and fed back to fill feed deficits.*

day rolling average FEI was within the 'C' band. Based on the Fonterra FEI grading system, this resulted in demerits being applied to two days of milk production (\$0.04/kg MS overall milk price reduction). For both the GRAIN and PASTURE farmlets, the six-day rolling average FEI remained in the 'A' and 'B' bands for the whole lactation.

MS production was greatest in the PKE farmlet and least in the PASTURE farmlet. Compared with the PKE farmlet, cows in the GRAIN farmlet produced 15kg MS/cow and 47kg MS/ha less. This difference was due to several factors, including GRAIN farmlet cows milking for three fewer days and being offered 60kg DM/cow less supplementary feed. Cows in the PASTURE farmlet milked for six additional days compared with the PKE farmlet cows – yet produced 66kg MS/cow and 301kg MS/ha less.

A large marginal MS response to supplementary feeding

**Figure 1.** Six-day rolling average fat evaluation index for the PKE, GRAIN, and PASTURE farmlets



was recorded in this comparison. Compared with the PASTURE farmlet, the response was 115g and 105g MS/kg DM in the PKE and GRAIN farmlets, respectively. This is greater than the New Zealand DairyBase ([dairynz.co.nz/DairyBase](http://dairynz.co.nz/DairyBase)) average from the last 12 years: 80g MS/kg DM.

The comparative stocking rate (CSR) was greater than 90kg liveweight/t DM on all three farmlets, above optimal (80 to 85kg liveweight/t DM). This created a larger feed deficit, which, combined with strict grazing decision rules, contributed to the large response.

In theory, the response to supplementary feed is determined by the amount of additional metabolisable energy (ME) supplied. This suggests maize grain and barley should produce a greater response per kg DM compared with PKE because of the greater ME content (maize grain and barley approximately equal to 13MJ ME/kg DM; PKE approximately equal to 11MJ ME/kg DM).

However, in this comparison, the response was greater in the PKE farmlet. This likely occurred because pasture substitution is less when offering fibre-based (PKE) compared with starch-based (maize grain and barley) supplementary feeds<sup>1</sup>, and current laboratory values may underestimate the ME content of PKE<sup>2</sup>.

## Profitability

Differences in profitability were estimated for each farmlet. Where applicable, we used input prices for the research farm during the season. Average costs of System 3 and 4 South Taranaki farms, extracted from DairyBase, were used where research farm expense data, relevant to each farmlet, couldn't be determined. We then completed economic modelling, accounting for changes in milk and key input prices, to evaluate the likely long-term profitability of the three farmlets.

In the analysis, we used an average milk price of \$6.44±1.65/kg MS, PKE price of \$289±42/t, and maize grain and barley price of \$424±29/t. Results are summarised in *Table 1*.

Due to the differences in MS production, total revenue was 3% lower in the GRAIN farmlet (\$8800/ha) and 22% lower



in the PASTURE farmlet (\$7100/ha) compared with the PKE farmlet (\$9090/ha). Conversely, due to the relatively greater cost of maize grain and barley, the GRAIN farmlet (\$6400/ha) farm operating expenses were 9% greater compared with the PKE farmlet (\$5880/ha), and 45% greater compared with the PASTURE farmlet (\$4420/ha). This analysis does not include capital costs (e.g., it assumed an in-shed feeding system is already in place).

Overall, this meant profitability in the PKE farmlet (\$3215/ha) was 33% greater than the GRAIN farmlet (\$2412/ha), and 16% greater than the PASTURE farmlet (\$2687/ha). Sensitivity analysis concluded the PASTURE farmlet was more profitable compared with both the PKE and GRAIN farmlets when milk and supplementary feed prices were unfavourable (e.g., less than

**Table 1.** Production and profitability of the PKE (3.3 cows/ha offering PKE), GRAIN (3.3 cows/ha offering maize grain and barley), and PASTURE (3.0 cows/ha pasture-only) farmlets.

2017/18 season at \$6.44/kg MS				
Treatment	FEI	Production		Profit
	FEI average	kg MS/cow	kg MS/ha	\$/ha
PKE	6.6	404	1328	\$3215
GRAIN	5.1	389	1281	\$2412
PASTURE	4.0	338	1027	\$2687

**“...even with a large MS production response to supplementary feeding, profit may not increase.”**



*Dairy Trust Taranaki's 110ha (effective) Gibson research farm near Hawera, South Taranaki. With 72 x 1ha paddocks, and infrastructure to support multiple herds, the property is perfect for farmlet comparisons.*

\$5.00/kg MS and more than \$450/t).

This highlighted the resilience of low-input systems to market variability, but the PASTURE farmlet was less profitable than either of the other two farmlets when those prices were favourable. This sensitivity to milk price and cost of feed inputs is also observed in analyses of New Zealand and Irish commercial dairy farm datasets<sup>3, 4</sup>.

Although there was a large response to supplementary feeding, the marginal cost of supplementary feeding was \$7.78/kg additional MS in the GRAIN farmlets due to the high cost of the supplementary feed. Therefore, the cost of additional MS produced (\$7.78/kg MS) was greater than the milk price (\$6.44/kg MS) and was not returning a profit in the GRAIN farmlet.

The PASTURE farmlet was 11% more profitable than the GRAIN farmlet, even when producing 23% less MS/ha, highlighting the need for farmers to accurately assess supplementary feeding effects on profit. Conversely, the marginal cost of supplementary feed in the PKE farmlet was \$4.83/kg MS, so PKE feeding was adding to profit.

### **Research conclusions (Year 1)**

In summary, in the 2017/18 season, removing PKE and reducing the stocking rate was more profitable than replacing PKE with maize grain and barley. Both these alternatives were less profitable than offering PKE.

This comparison highlights that, even with a large MS production response to supplementary feeding, profit may not increase. The type and cost of supplement fed and the marginal cost per kg MS must be carefully considered when making feed-purchasing decisions.

Look out for part two of this article in our next edition of *Inside Dairy* (June/July).

For more on the research being conducted by DTT, visit [dairytrusttaranaki.co.nz](http://dairytrusttaranaki.co.nz)

### **References:**

1. Sheahan A. J., J. K. Kay, and J. R. Roche. 2013. Carbohydrate supplements and their effects on pasture dry matter intake, feeding behavior, and blood factors associated with intake regulation. *Journal of Dairy Science* 96(12):7818-7829. <https://doi.org/10.3168/jds.2013-6981>.
2. Mandok K. M., J. K. Kay, S. L. Greenwood, J. P. McNamara, M. Crookenden, R. White, S. Shields, G. R. Edwards, and J. R. Roche. 2014. Efficiency of use of metabolizable energy for body weight gain in pasture-based, nonlactating dairy cows. *Journal of Dairy Science* 97(7):4639-4648. <https://doi.org/10.3168/jds.2013-6912>.
3. Neal M., and J. R. Roche. 2020. Profitable and resilient pasture-based dairy farm businesses in New Zealand. *Animal Production Science* 60(1):169-174. <https://doi.org/10.1071/AN18572>.
4. Ramsbottom G., B. Horan, D. P. Berry, and J. R. Roche. 2015. Factors associated with the financial performance of spring-calving, pasture-based dairy farms. *Journal of Dairy Science*. 98:3526-3540. <https://doi.org/10.3168/jds.2014-8516>.

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