

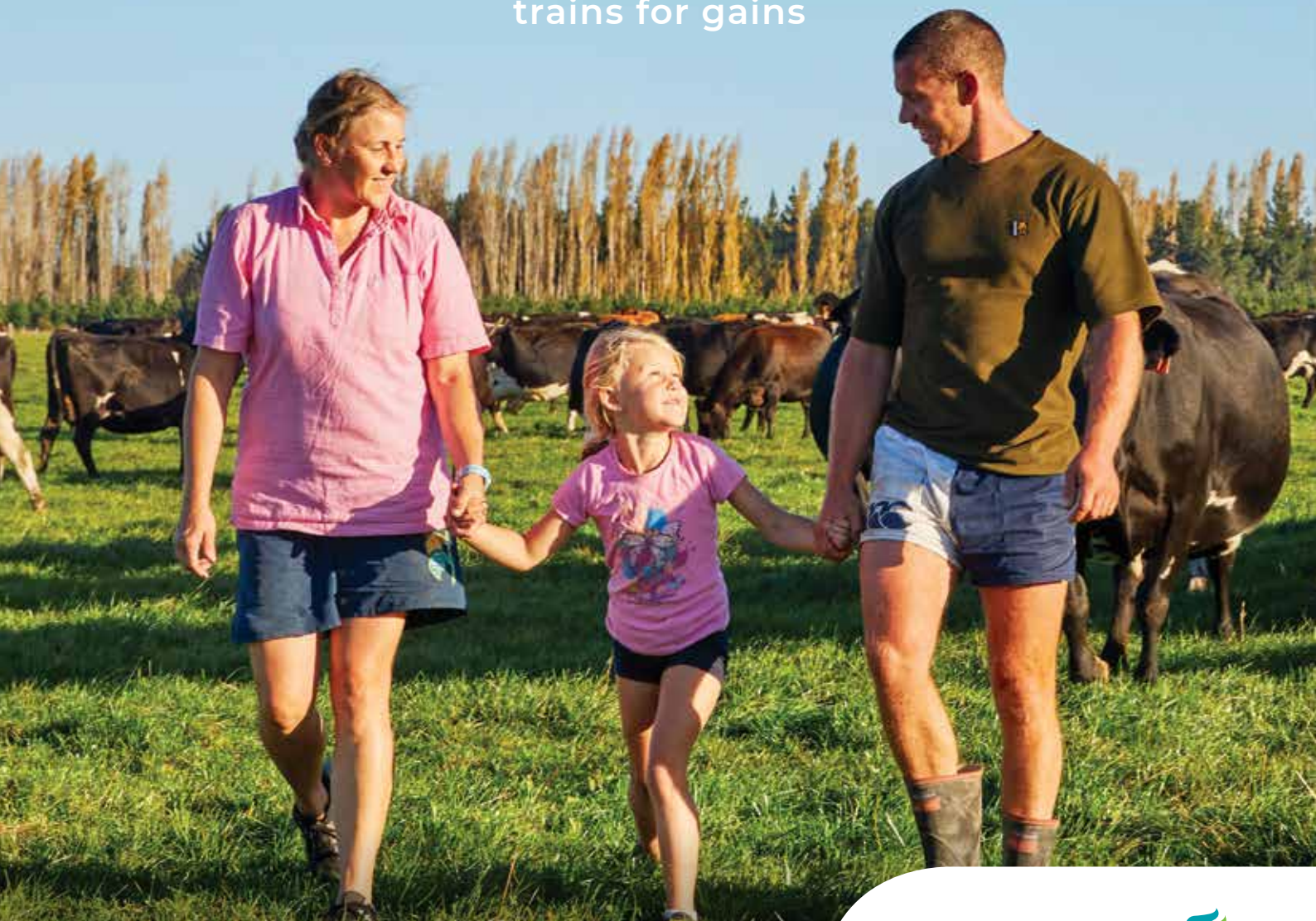
# INSIDE DAIRY

Your levy in action

## THRIVING THROUGH CALVING



Canterbury team  
trains for gains



// Do high milk volumes cause scours? **13** // Managing lameness **14**  
// Getting set for winter **16** // Beef + Lamb NZ levy vote **20**

DairyNZ 



## OVER THE FENCE...

**Staff and animal wellbeing are always important, but especially now.**

As we enter a new season and the busy time calving brings, we know our farm teams feel the challenge that comes with juggling jobs.

Knowing how to get the best out of our people, while ensuring they're getting breaks, requires reliable systems, effective communication, and an eye on how our workmates are faring. Canterbury sharemilkers Richard Pearse and Susan Geddes (page 4) have found some creative ways, both physical and technological, to support their people and animals.

Focusing on our people and animals brings many benefits, including the flow-on effect of a successful calving leading to increased profit.

Another big priority right now is winter grazing. Many farmers and our graziers are in the thick of managing cows on crops, and ensuring animals and the environment are protected.

We know how vital this winter is, and there are some great resources available to help you. It's not too late to complete a winter grazing plan – this will help the team keep all key actions in place, including a wet weather plan. Our Winter Grazing Plan is available at [dairynz.co.nz/wintering](http://dairynz.co.nz/wintering)

DairyNZ is undertaking a comprehensive campaign, alongside farmers, to help keep the momentum going this winter. We're pleased to be working on this with farmers, including Tangaroa Walker (page 16).

We all need to help make a difference this winter – talking to other farmers about what you're doing is a good way to share solutions and help others.

We're at Fielddays and SIDE events in the coming month. Come and see us at our Fielddays stand and, for those in the south, there are some great farmer-focused sessions and workshops to attend (details on page 3).

Voting is about to open for Beef + Lamb New Zealand's six-yearly beef levy referendum. See page 20 for details on how to register and vote.

Finally, to those of you who are moving on June 1, I hope it goes smoothly.

If you have any feedback or questions, please drop me a line – [tim.mackle@ceo.dairynz.co.nz](mailto:tim.mackle@ceo.dairynz.co.nz)

**Tim Mackle**  
Chief executive  
DairyNZ

## Features

### 13 Mythbuster

There's a common belief that feeding a high volume of milk to calves causes scours. Is it true?



### 16 Winter wise

Southland's Tangaroa Walker doesn't claim to be an expert, but he has some solid tips for a successful wintering.



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# CONTENTS

## 4 Team trains for calving gains

Communication, training and a strong focus on wellbeing help Canterbury sharemilkers Richard Pearse and Susan Geddes keep their team and animals thriving through calving.



## Regulars

- 1 Take 5
- 20 Just quickly
- 22 Animal matters
- 23 Regional update
- 24 Events calendar

## In this issue

- 2 Farmers' Forum 2021– highlights online now
- 3 Event-filled month for farmers
- 11 What do farmers love about calving time?
- 12 Feeding calves for profitability
- 14 How to manage lameness
- 18 Are calves feeding from their dam?
- 19 Dropping N isn't gibb-erish
- 26 Tech Series: Living below the FEI threshold – 2018/19 season



### We appreciate your feedback

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

## TAKE 5

### Tips for farmers

## 1. New podcast episodes



Join the hundreds of dairy farmers listening to our *Talking Dairy* podcast, where we tackle topical and seasonal issues like climate change, contract milking and staff retention. Listen while you're getting the cows in, milking, or whenever. Go to [dairynz.co.nz/podcast](http://dairynz.co.nz/podcast) or your favourite podcast platforms.

## 2. Milk smarter this season

If you're milking in a herringbone, don't wait for all the cows to row up – start cupping once the first batch of cows is loaded. Check out other milking efficiency tips at [dairynz.co.nz/milksmart](http://dairynz.co.nz/milksmart)

## 3. All aboard



New staff joining the team this month? Ask your existing team members to explain their role and demonstrate a specific task to the new employees. Existing staff often have great ideas for the onboarding process, so ask for their input! Learn more at [dairynz.co.nz/onboarding](http://dairynz.co.nz/onboarding)

## 4. Right as rain

Wet weather – are you ready for it? Make it easy for your team to do the right thing this winter: look at your options, make decisions, and write them down together now. That way, your team will know what to do and when to do it. Go to [dairynz.co.nz/wintering](http://dairynz.co.nz/wintering) for more.

## 5. Track and trace

NAIT is like the COVID Tracer app, but for stock. It's vital to record your stock movements so they can be tracked and traced if there's a disease outbreak. Find out more about updating your NAIT at [dairynz.co.nz/NAIT](http://dairynz.co.nz/NAIT)



# FARMERS' FORUM 2021



*Economist Cameron Bagrie.*

## Highlights online now

Around 430 farmers took part in DairyNZ's Farmers' Forum 2021 in Hamilton and Invercargill on April 29, with hundreds more registering for our Farmers' Forum webinars in May.

In line with this year's theme of 'Sustaining Success', a range of speakers shared their views on how the Kiwi dairy sector can retain its world-leading position. They also offered strategies for farmers to adopt on-farm.

We know many farmers couldn't make the one-day event or the webinars, and others will want to see certain parts again. So, we've put videos of many of the keynote sessions, plus the webinars, up on [dairyNZ.co.nz/farmersforum](https://dairyNZ.co.nz/farmersforum)

Highlights you can view include:

- economist Cameron Bagrie sharing future-focused insights on how dairy farmers might fare in 2021 and beyond
- Climate Change Ambassador farmers and guests discussing challenges, opportunities, research and solutions for farmers as we work to reduce emissions
- a webinar about New Zealand dairy competing on the global stage
- DairyNZ's science team discussing the latest science-based solutions to farming challenges.

We also have links to interviews with workshop hosts, podcasts, and lots more! It's all online at [dairyNZ.co.nz/farmersforum](https://dairyNZ.co.nz/farmersforum)



*Farmers were challenged to keep working towards an increasingly sustainable future.*



*Climate Change Minister James Shaw.*



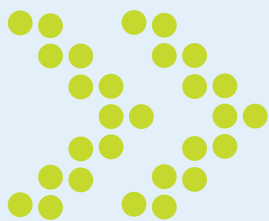
*Dairy farmer Ben Purua.*



*Fonterra's Lara Phillips.*



*The forum is always a great opportunity for farmers to network and pick up new ideas.*





# Event-filled month for farmers

Don't miss two great opportunities to network, learn, and get off the farm at **Fieldays** in the north, and **SIDE** in the south.



## National Fieldays

The Southern Hemisphere's largest agricultural event, National Fieldays, is back for 2021. DairyNZ's site (in The Pavilion) will focus on helping you sustain success on-farm. Our team is looking forward to meeting you for a chat.

### When and where

- Mystery Creek, south of Hamilton.
- Wednesday June 16 to Friday June 18, 8am to 5pm.
- Saturday June 19, 8am to 4pm.

### Tickets and information

Details at [fieldays.co.nz](http://fieldays.co.nz) – including Covid-19 info.

## SIDE 2021

Run by farmers for farmers, the South Island Dairy Event (SIDE) includes a wide range of farmer-focused sessions and workshops, including several run by DairyNZ. Two workshops this year will address some of the biggest calving challenges on-farm.



### Workshop 1: Are we getting calves off to the best start?

Being a large-animal vet and herd-owning sharemilker with over 25 years' experience in the dairy sector, Nicola Neal is perfectly placed to talk about giving calves a great start in life.

"Growing our young dairy stock fast for the first eight weeks of life has the potential to affect their first lactation and future production more than any other single thing," says Nicola. "But could we do it better, faster, more efficiently and more cost-effectively?"

These are just some of the questions Nicola will work through in a session designed to challenge you to think about your young-stock system and how you can turn 'surviving' into 'thriving'.

Nicola says anyone involved in calf rearing on-farm would benefit from this session. Others who could benefit include farm owners, managers and team members who want to have a better understanding of how to improve calf rearing to achieve better lifetime production.

### Workshop 2: What's the future for bobbies?

David Williams and Brendan Kelly of Maatua Hou Ltd will deliver a workshop showcasing the efforts of their business model focused on partnering with farmers to reduce their bobby numbers.

Based at Burnham near Christchurch, Maatua Hou Ltd is an equity partnership of four young couples.

"In our 2020 trial year, we reared 550 dairy beef heifers and other rejected animals for the beef market; and in the coming seasons, we'll be borrowing very little overdraft," says David.

The workshop will discuss opportunities for the industry. For example, one concept could see an animal reared to eight to 12 months old, producing very tender beef and creating a stream of other benefits on-farm in the process.

### When and where

- Ashburton Trust Event Centre, 211 Willis Street, Ashburton.
- Tuesday June 22 and Wednesday June 23.

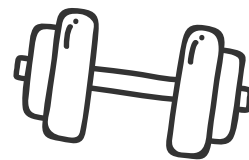
### Registrations and information

Visit [side.org.nz](http://side.org.nz) and follow the latest updates at [facebook.com/SouthIslandDairyEvent](https://www.facebook.com/SouthIslandDairyEvent)

Worth the weight: keeping the team running at their best is a top priority for Richard and partner Susan. Here, Richard works out at the farm's gym, which they share with their team and neighbouring farmers.



# TEAM TRAINS for CALVING GAINS



A recreation area, on-farm gym, WhatsApp groups and flexible milking schedules are just some of the ways Richard Pearse and Susan Geddes keep their team and animals thriving through calving.

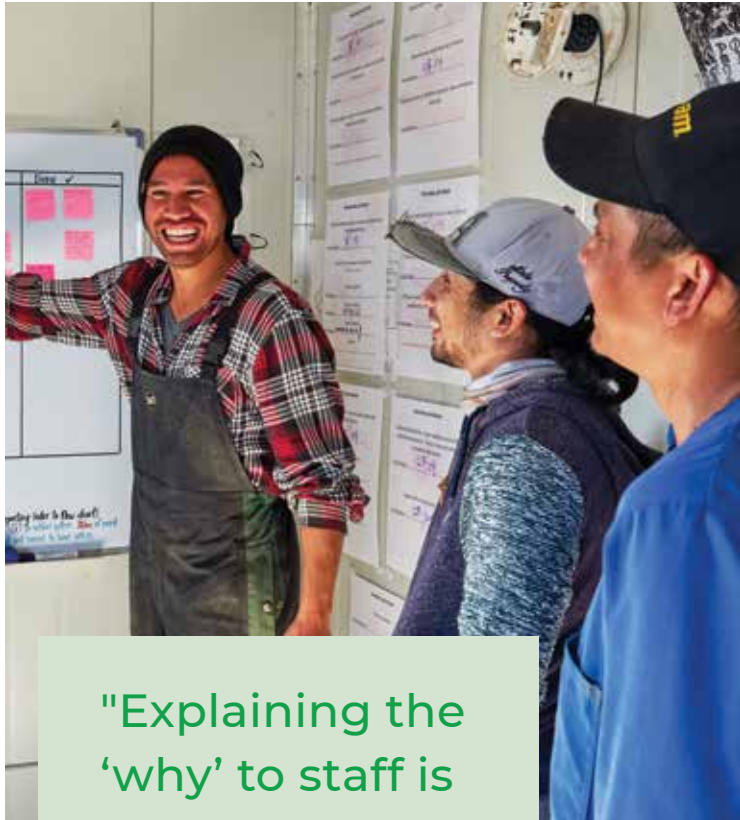
**C**ommunication and care. Those anchors keep Canterbury 50:50 sharemilkers Richard Pearse and Susan Geddes on track, getting the best out of their people, animals, and farm business. It's how they manage to look after all three throughout the busy calving season.

"Having a clear set of values to run ideas through makes decision-making much easier," says Richard. "That includes looking at the financial pros and cons, what the impact is on the farm, the system and the team."

"One of the things we've always said is that we want people to have lives outside of work and we don't want to use people or get ahead at their expense."

Susan, who's a dairy vet, is also a very important part of the whole operation, emphasises Richard.

"Even working four days a week as a vet and on weekends, she'll help out with our team training, calf rearing and accounts, and uses her vet skills on the farm."



"Explaining the 'why' to staff is very important."

### People power

Richard and Susan came onto Waimak Dairies when it was converted to dairying in 2015/16. They peak-milk 1200 Kiwi-Cross on a 343ha dairy platform (plus a 208ha support block). The couple's team includes Ulyses Castello, 'RJ', Rustum Yosores, Mark Manatad, and Allen Quilal-lan. Calf rearers are also brought in as needed.

In the lead-up to calving, Susan runs multiple pre-spring training sessions over a few weeks. These include topics on calving, calf rearing, and peri-calving issues such as mastitis.

"We've found over time that explaining the 'why' to staff is very important for overall understanding and learning," says Richard.

Over spring, the farm team gathers for daily toolbox meetings which help everyone stay on track.

### Tools on tap

One of the main ways Richard, Susan and the team stay in regular communication is through smartphone messaging tool WhatsApp. They've set up several WhatsApp groups for different purposes.

They have a general farm chat group for keeping everyone up to date with daily jobs and informative discussions; and a health



(above) Richard says team ideas have led to some major changes on-farm. (main) Through winter into calving time, Richard and Susan feed the cows fodder beet, kale, grass and silage.



and safety group where new hazards are identified, and other topics are discussed.

They've set up another WhatsApp group for discussing animal health matters. For example, it can be used to identify lame or sick animals to be drafted and looked at, or metabolic cows that have been treated in the paddock.

"We find the groups really useful as they allow us to have a record of the conversation. Also, information is distributed to the whole group at the same time, so people aren't excluded," says Richard.

Several years ago, the team went through FarmTune, a lean management course developed by DairyNZ. They used this to look at their systems and identify how they could change or streamline their operation. That's something they've continued to do.

"Having everyone involved has been a real eye-opener, as it's shown me that I don't need to be the only one with all the answers. The team has also come up with some really good ideas that have led to some major changes on-farm," says Richard.

"We've got the spreadsheets set up at the shed which the team fill out, to allocate grass area and silage. They also use them to work out total ME and DM intake versus milk production," says Richard.

"These assist them to accurately feed cows while relating that back to the Spring Rotation Planner, so that we can hit our targets."

### Working in wellbeing

Keeping the team running at their best is a top priority for Richard and Susan. They've created a facility with recreational equipment, including kayaks, a paddle board, a BBQ, stereo and Wifi. This area, next to the farm's irrigation pond, has been a place where the



## RICHARD AND SUSAN'S TOP TIPS

1



Communication, communication, communication.



2



Remember: the cows are the reason we're here. Look after them and they'll pay the bills.



3



Systems are important, including routines, preparation, training and planning.



4



Get some rest and down time – something we always need to remind ourselves to do too!



5



Be aware of the other things going on in the lives of your team.

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Get more tips on how to level up your calf care – visit [dairynz.co.nz/calves](https://dairynz.co.nz/calves)

Richard checks colostrum quality using a Brix refractometer.



From autumn, every cow's monthly body condition score is noted before they're drafted into herds pre-calving, then allocated feeds depending on their BCS.

Richard, Susan and daughter Lily (7). A calf rearer also looks after Lily when Susan's vet workload takes her off the farm.



"I don't think we had too many nights working past 5.30pm during spring."



team (and the wider community) can gather over the summer months. Richard and Susan have created a Crossfit-style gym on the farm, which is for the team and neighbours to use.

During the busy spring months, the couple provide hot food in a slow cooker at the dairy office. There's usually a stash of baking and 'grab and go' items as well, to ensure staff stay well-fed during the long hours at calving time.

Flexibility and efficiencies from different milking schedules benefit the team and animals too. They milk twice a day (TAD) through spring and mating, while 3-in-2 from early December creates a 4.5-on and 3.5-off roster until the end of the season. This means reduced work hours for the team, and the flexibility to decide on their workload.

"Getting our systems right and having team ownership allows us to be efficient. I don't think we had too many nights working past 5.30pm during spring," says Richard.

### Gearing up ahead

Richard says getting the cows ready for calving is a key focus, starting in March.

"Coming into autumn, we try to body condition score (BCS) every cow each month. We make dry-off and culling decisions to get the cows up to target BCS by pre-calving. We draft the cows into four herds: light cows, young cows, fat cows, mixed-age cows – and allocate different feeds for each herd depending on their condition."

Drafting the cows into these herds allows Richard to have better control of the animals when they move to the support block for wintering.

### Calves and colostrum

Once calving starts, the team does a calf pickup twice a day, says Richard. They use a Brix refractometer to monitor the

## FARM FACTS

**NAME:** Richard Pearse and Susan Geddes

**POSITION:** 50:50 sharemilkers

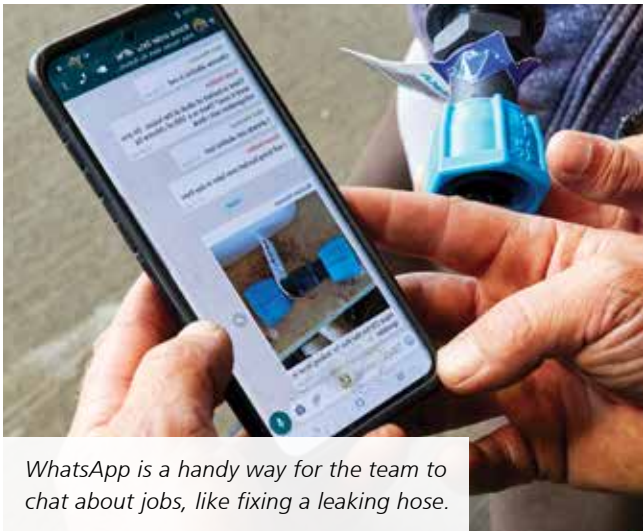
**LOCATION:** Eyrewell, Canterbury

**FARM SIZE:** 612ha (total farm area)

**HERD SIZE:** 1250 cows wintered/1200 peak-milked (Kiwi-Cross)

**FARM SYSTEM:** 4

**PRODUCTION:** 581,000kg MS/year (2019/20)



*WhatsApp is a handy way for the team to chat about jobs, like fixing a leaking hose.*



*Richard and Susan's farming approach gives team members like Allen Quilal-Ian (pictured) the flexibility to decide on their workload.*

colostrum to make sure it's high-quality before its fed to the new calves.

The team tube-feed colostrum to new calves for their first feed. For their second feed, calves are trained to the feeders. The calves are also provided with ad-lib grain and Lucerne baleage, and these are kept topped up and fresh. Bloods are taken to test for failure of passive transfer (see page 12 for more on this topic). These tests ensure the team's processes are working in relation to colostrum management.

Richard says the calves are also kept indoors as long as there's the space for them.

"Then they'll go out into the calf paddocks and stay on the calf feeders for a couple more weeks. Following this, they're boxed into groups of 48 and trained onto the 60-teat mobile feeder, then they'll go out to the dairy platform."

The calves are weaned through November and December before being sent about 30km away to grazing blocks in Oxford, northwest of Christchurch.

### Coated with care

Caring for their cows and calves is paramount for Richard and Susan. Richard is a member of the South Island World-Leading Animal Care Farmer Group (which supports the sector-wide animal care commitment of the Dairy Tomorrow strategy).

The couple is also currently working on planting shelter belts for their animals.

"In the interim, we have been using calf coats when

the animals are moved outside. These provide warmth and protection from rain and wind chill," says Richard. "The covers are generally removed prior to the calves being taken onto the dairy platform.

"It's a big investment in time, but it's the right thing to do. It makes a massive difference to calf wellbeing during periods of bad weather. It's incredible how warm and dry the calves stay with the jackets on during adverse weather."

### Profit takes teamwork

Keeping a strong focus on people and animals doesn't mean the farm's economic performance takes a back seat, however.

"We have a partner in the business with the financial skills – he handles that side of things. He's amazing, and we regularly sit down together over the finances," says Richard.

"Having said that, we've always put the people and the cows first, and for us, the business follows that. Yes, we might have taken a few extra years to achieve our goals, but we've got the results we were after."

### The challenge is worth it

Overall, Richard says communication is "the big one" – it makes everything else work. Getting that right, alongside preparation, planning, training, and having good systems and consistent routines in place, also means he's not fazed by the unexpected.

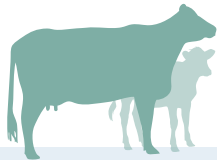
"I love it when situations come up at calving time and you have to problem-solve on the go," says Richard. "Your brain has to work at a million miles an hour and, at the end of the day when you still manage to get everything done and people home on time, you think, 'yeah, that was really satisfying'."

Get more tips on how to level up your calf care – visit [dairynz.co.nz/calves](https://dairynz.co.nz/calves)

"We might have taken a few extra years ... but we've got the results we were after."



# What do farmers love about calving time?



**SARA RUSSELL – ASHBURTON**

"Seeing how our breeding plans have turned out. 2021 will be exceptionally exciting as I am expecting my first three-quarter Guernsey calf!

"I also love watching the next generation of replacements being born: the daughters, granddaughters and great-granddaughters of cows we've reared."



**WENDY MAIN – OXFORD**

"Calving is like Christmas: every day you go to the paddock to see what presents have been dropped off."



**DEBBS TAGGART – ASHBURTON**

"I enjoy the team spirit and baking for them (to nurture them while they nurture the new babies and their mums).

"I love the fresh mornings and tagging and cuddling the babies in the shed. Calving is the start of a new year and nurturing new life.

"It's also great seeing the long-awaited results of our AI bull choices. Learning about new products and establishing if they can improve our existing system and practices."



**JENNIFER DAVISON – LEESTON**

"Getting the milk in the tanker as the bank balance starts to deplete!

"Also, after a day's hard work and all the energy that goes into the planning, having happy healthy cows and calves as the reward, along with building a bond with cows that require nursing and seeing them return to full health. That's what it's all about."



**RACHEL LIEUWES – DARFIELD**

"I love seeing the product of the busy AI season – the next generation of calves, and heifers coming into milk. Calving is bloody hard work, but it's good work."



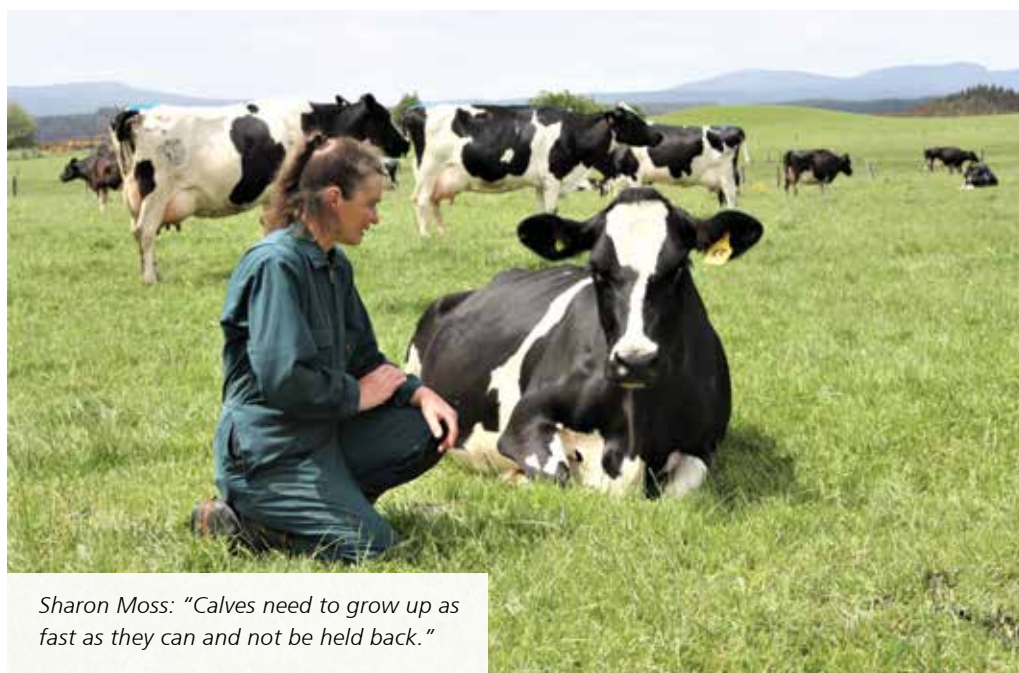
**ANNABEL DONOVAN – BAY OF PLENTY**

"I love the camaraderie of our team, feeling we're all in this together. I also enjoy the peace and quiet of night checks in the moonlight, as first-calvers follow your torch beam trying to lick it when it's captured in mist.

"Calving is also when all your animal husbandry skills are thoroughly tested, and you live and breathe being a dairy farmer."

# Feeding calves for profitability

Tokoroa farmer Sharon Moss has had some eye-opener moments while fine-tuning her calving system over the last couple of years.



Sharon Moss: "Calves need to grow up as fast as they can and not be held back."

For experienced farmers Sharon and her husband George, the main goal during calving is to grow efficient cows that are "a joy to milk".

"And we want to have them for as many lactations as possible," adds Sharon. "We strive to give them every opportunity to grow and develop into mature two-year-olds that are ready to take their place alongside the older cows in the herd."

"One measure of success is when experienced people see the herd in the spring and have to ask me which ones are the heifers."

Last season, Sharon took part in the Dairy Tomorrow World Leading Animal Care pilot, which involved testing a sample of young calves for failure of passive transfer (FPT). Calves that fail to absorb enough antibodies in the first 24 hours are said to have FPT, which can lead to poor growth, and adverse effects on health, lifetime productivity and fertility.

Sharon, previously unaware of FPT testing, says taking part in the pilot was a great way to evaluate her system.

"Blood testing shows how you're tracking, and I was pleasantly surprised at the results. All but one calf came up in the 'adequate range' of having received enough good-quality colostrum."

Taking up the suggestion to identify the highest-quality

colostrum using a Brix refractometer has also been an eye-opener, she says.

"There's really no correlation at all between quality and what it looks like. It can look very nice – thick, creamy, and yellow – but it's not necessarily better."

"In general, I've found the most recently calved cows (in terms of hours) have the highest-quality colostrum. And, often, heifers' colostrum was better than cows' colostrum."

Sharon's priority is ensuring new-born calves receive enough high-quality 'gold' colostrum as soon after birth as possible. She feeds calves

three litres of warm colostrum twice daily for the first few days; then the milk volume is increased until they reach a maximum of nine litres per calf per day.

Weaning is a gradual process. The aim is for a quiet low-stress weaning off milk over several weeks.

"Priority feeding throughout the crucial early-growing stages of their lives sets them up to be productive, profitable members of the herd that we can be proud of," says Sharon.

She says calves are "quite marvellous" when you consider what they do and how they grow.

"They then turn around, eat grass, and make milk. How do they do that living on salad?"

## Liquid gold

Calves are born with an under-developed immune system. Feeding them as soon as possible after birth with high quality 'gold' (first-milking) colostrum allows antibodies to be absorbed until their own immune system develops.

For further hints and tips visit [dairynz.co.nz/colostrum](https://dairyNZ.co.nz/colostrum)



Ad-lib milk feeding is standard practice on Amy Johnston's Southland farm.

## Does more milk cause scours?

There's a common belief that feeding a high volume of milk to calves causes scours. We asked DairyNZ solutions and development specialist Katherine DeWitt if it's true.



A high volume of milk feeding is considered at least 20% of a calf's bodyweight in milk, or eight to 12 litres per day. But does this cause diarrhoea (scours) in calves? Recent studies tell us the answer is 'no'.

### Scouring for evidence

Feeding calves a greater volume of liquid feed does create more faeces overall – but offering consistently high volumes of milk should not result in scours. Scours episodes are commonly caused by viruses, bacteria and protozoa, and the volume of milk fed should have little effect on their spread.

Calves are more likely to be exposed to these bugs through:

- poor hygiene (especially associated with milk feeding equipment)
- housing conditions (especially bedding conditions)
- insufficient colostrum intake, leading to a poorly developed immune system.

### High volumes and overall health

Several studies have shown that not only does feeding higher volumes of milk **not** cause scours, but it actually **promotes** a better immune system in calves.

High milk intake also leads to an increase in calves' pre-weaning growth rates, which is linked to better lactation performance, and earlier age at first breeding. Other benefits include reduced cross-sucking behaviour and less vocalisations.

### Farmer experience

Southland farm owner Amy Johnston decided to try ad-lib milk feeding 10 years ago after having trouble with scours. She trialled one pen of calves, then quickly switched to rearing her 250 replacement calves this way.

Amy fills the drums with milk once or twice a day, depending

on the temperature outside. She estimates that each calf drinks at least eight litres of milk daily.

"Sometimes we'll get the odd scours if it gets cold, but I definitely notice less scours than our previous system. The biggest surprise was actually that the pen is silent. I didn't realise that they only holler when they're hungry or stressed.

"Watching the behaviour and playfulness in the pen, you can see that they're happier and just as friendly. The main motivator for me is labour saving, but more than that, I know my calves are getting a good start and that they're happy and not hungry."

### Here's how

For best results, feed calves at least twice a day or ad-lib because they can't drink high volumes in one feeding. This also satisfies their natural need to suckle and drink milk in multiple meals.

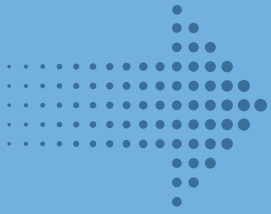
Find out more about rearing calves at [dairynz.co.nz/calves](http://dairynz.co.nz/calves)

**Myth** Feeding calves high milk volumes causes scours.

**BUSTED**



Scours is more likely to be caused by bugs and/or poor hygiene and housing conditions. Feeding higher milk volumes can actually improve calves' future health.



# HOW TO MANAGE

## CLAW HORN LAMENESS

We know the risk for claw horn lameness starts at calving as the ligaments within the hoof relax. These pictures below are examples of claw horn lameness.

**WHITE LINE DISEASE**



**SOLE BRUISING (OR HAEMORRHAGE)**

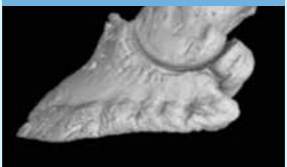


**SOLE ABSCESS OR ULCER**

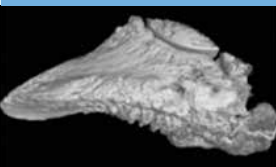


We also know that once a cow has been lame once, the bone within the hoof can be damaged permanently, making her more likely to get lame again.

**NORMAL BONES**



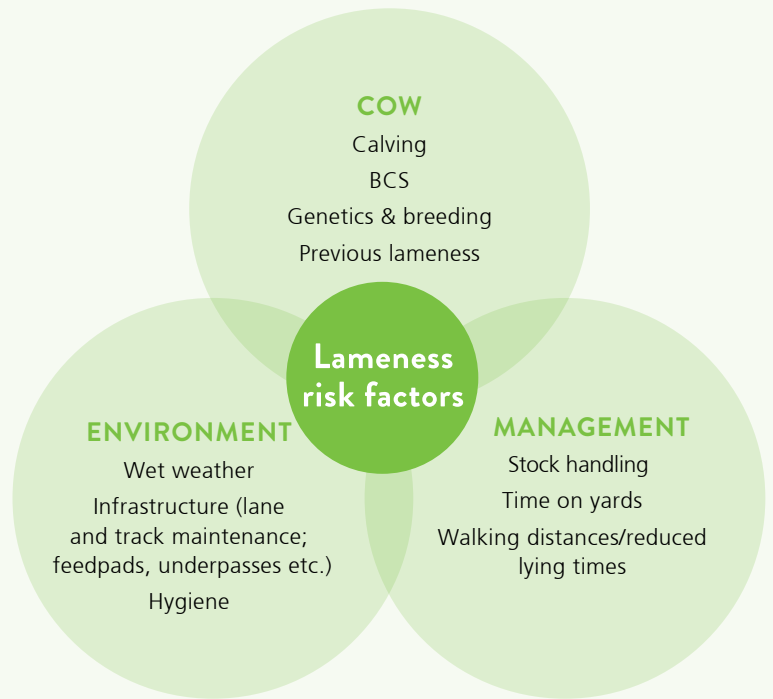
**ABNORMAL BONES**



While you can't stop the calving effect, you can plan now to minimise the impact of lameness and prevent it in the future.

## PLAN

With support from a trained Healthy Hoof provider, develop a lameness prevention plan that addresses the key risk factors on your farm.



**WHAT YOU SEE**

Vulnerable hooves

**TIME**

CALVING

**WHAT YOU CAN DO**

Take special care with stockmanship and herd management



# LAMENESS







## DO

Identify lame cows early.

- Do regular lameness scoring.
- Record ALL lame cows on the DairyNZ Healthy Hoof app.



Effective treatment.

-  Get staff trained.
-  Use a trained rural professional.
-  Keep lame cows close to shed.
-  Don't forget pain relief.

## REVIEW

With your Healthy Hoof provider, review lameness records and your prevention plan, to support future decision-making.

- Consider culling cows that are repeatedly lame.
- Any work or changes needed in preparation for next season? For example, lane maintenance, staff training in stockmanship and/or treatment.



Peak lameness (lameness that started at calving)

A second peak in lameness; thinner soles; wet weather; repeat cases from spring

CHRISTMAS

DRY-OFF

CALVING

Early detection and treatment

Lane maintenance and herd management



Upskill yourself further at [dairynz.co.nz/healthy-hoof](https://dairynz.co.nz/healthy-hoof)

**“I don’t claim to be an expert,  
but farmers listen to farmers ...”**

# WINTER WISE

**Southland contract milker and social media sensation Tangaroa Walker is dotting his i’s and crossing his t’s on his winter management plans.**

Setting up for a successful winter season started six months ago. That’s when Tangaroa and his farm team, Goody and Detroit, created a grazing plan, decided which paddocks to crop and what to plant.

The team commits their grazing plans to the shed whiteboard before dry-off, with the aim of achieving good environmental and animal outcomes while grazing cows on fodder crops during months when the grass doesn’t grow.

The 230ha farm at Mabel Bush, 20km east of Invercargill, has three streams running through it and about 2km of tile drains. Management of these areas and paddock selection for crops is critical. The team’s measures include creating buffer zones next to the waterways, grazing crops strategically on sloping paddocks, break fencing, and using portable water troughs to limit cow



movements.

About 13% of the farm is planted in fodder beet and kale, and Tangaroa supplements this with baleage (700 large bales) and 100 tonnes of silage.

## **Expecting the unexpected**

Tangaroa says it’s important to work out all the ‘what if’ scenarios and plan for every eventuality.

# DOWNLOAD YOUR WINTER GRAZING PLAN

If you don't have a winter grazing plan, it's not too late. Share the plan with your team so everyone knows what the 'plan B' is for wet weather.

Two plans are available:

1. DairyNZ's 2021 winter grazing plan:

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

This is a practical, quick and user-friendly tool, which includes a paddock plan template, for this winter.

2. MPI's Winter Grazing Module:

[mpi.govt.nz/protecting-freshwater-health](https://mpi.govt.nz/protecting-freshwater-health)

This is a comprehensive planning resource with helpful actions.

We're encouraging all farmers to have a plan, which can become part of your Farm Environment Plan.



"We have plans A, B, C and D to cover every possible situation.

So, if we have a catastrophe, whether it's weather or animal-health related, when the pressure comes on, we're prepared. Being organised is the answer," he says.

"In normal circumstances, we shift the cows twice a day but if it's wet, they're moved more often. If there are any issues, we'll stand them off on back-up crop, or move them to dry paddocks."

In the run up to dry-off, the 550-cow herd is drafted into several smaller mobs based on body condition score, lameness, health, and age. This enables a daily visual check on each animal so anything out of the ordinary can be remedied quickly. Nearer calving, which starts on August 7, the cows are divided into calving mobs – early, middle and late – to keep an eye on their body condition score.

## Spreading the word

Back in 2012, a 22-year-old Tangaroa featured on the cover of *Inside Dairy's* August edition, following his win as the Young Maori Trainee of the Year in the inaugural Ahuwhenua Awards.

He told us then about his curiosity to see where and how technology would fit into farming. Nine years later, now aged 31, Tangaroa's taking full advantage of it by using various social media channels, including his popular Farm4Life Facebook page, to share his passion for the highs and lows of farming life. His farm manager Goody and farm assistant Detroit play enthusiastic supporting roles to their dynamic leading man.

It's through these social media channels that Tangaroa will be sharing his approach to wintering with other farmers and his 250,000 followers.

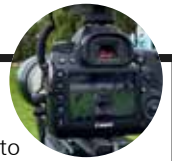
"I don't claim to be an expert, but farmers listen to farmers and if I can communicate how we go about wintering successfully, then I'm all over it."

On his social media channels, Tangaroa also interviews industry professionals, farm suppliers and others to help showcase the dairy sector.

"It's hard to be a dictator in your own land, so having experts, including people from DairyNZ, sharing their knowledge, gives us a higher chance of good engagement," says Tangaroa.

## KEEP AN EYE OUT

This year, DairyNZ is rolling out a campaign to keep winter grazing planning and management at the forefront. Tangaroa is one of several farmers helping us to get the wintering message out. In addition, DairyNZ is creating a series of wintering videos with Tangaroa, where he talks about his tips and learnings. Keep an eye out for the vids on social media.



## TANGAROA'S WINTERING TIPS

- 1 Observe the herd regularly during the transition period to ensure all cows are eating the crop normally and aren't exhibiting unusual behaviour.
- 2 Check power on electric fences. It needs to be over 6 kVA to ensure cows don't break out and get rumen acidosis.
- 3 Move your break fences and portable troughs regularly to avoid soil treading damage.
- 4 Collect plastic wrap every day ready for recycle pick-up.

Check out [dairynz.co.nz/wintering](https://dairynz.co.nz/wintering) and Tangaroa's Facebook page, [facebook.com/Farm4Life](https://facebook.com/Farm4Life)



# Are calves feeding from their dam?

## VetEnt researchers Emma Cuttance and Winston Mason share findings from a recent study on cow-calf behaviour.

Just how adequately cows feed their newborn calves remains a contentious issue between farmers, as does the topic of calf pick-up rates. These factors, along with public scrutiny of cow and calf separation, have created the need to investigate the cow-calf relationship further.

Last year, *Inside Dairy* (June 2020, page 15) shared initial results from Year 1 of a VetEnt study that observed cow-calf interactions across two Waikato and two Canterbury farms.

In particular, we were interested in how different approaches to feeding calves might affect the prevalence of failure of passive transfer (FPT). This occurs when calves fail to absorb sufficient antibodies from colostrum across their intestinal wall, increasing the risk of mortality and disease.

In Year 2, we repeated the study, using a different set of four farms from the same regions. Here's what we found across both research periods.

### What we did

We observed 703 calves and their dams for 24 hours a day across a two-week period on each of the eight farms, and recorded:

- calves' times of birth, first feed and/or pick-up from the paddock
- the weather, feeding break size, and pasture cover

- FPT prevalence, using blood samples taken from calves on day one of age (prior to being fed colostrum by the farmer) and again on day three of age
- colostrum quality using a Brix refractometer.

### What we found

Overall, 446 out of 703 (63%) calves fed from their dams in the paddock, but this ranged from 40% to 90% between farms.

The key results are presented in the table below, which shows the percentage of calves with FPT, depending on whether they fed off their dam in the paddock.

Calves that **did not** feed from their dam were about two times more likely to have FPT. However, the extent of FPT in these calves varied between farms, which we believe was due to the quality of colostrum offered in the shed. When calves were fed higher-quality colostrum (e.g. with a Brix measurement over 22%), very few had FPT.

### What this means

Whether to leave calves to feed off the dam depends entirely on each individual farm scenario. On some farms, the calves fed poorly off the dam, but were given exceptional colostrum in the shed. On other farms, calves fed very well off the dam, but the calf-rearing management and colostrum quality was poor.

The take-home messages so far are: test your calves for FPT to assess your management practices, feed high-quality colostrum, and work with your team to improve practices where needed.

For more information on calf rearing go to [dairynz.co.nz/calves](http://dairynz.co.nz/calves)

### The number and percentage of calves with FPT if they did or did not feed in the paddock off their dam, and the colostrum quality fed in the shed.

Farm	Year	Did feed off dam		Did not feed off dam		Colostrum quality in shed	
		No.	% FPT	No.	% FPT	Mean Brix %	% of samples $\geq 22\%$ Brix
1	2	69	10%	38	37%	19	0%
2	2	31	19%	5	60%	15	0%
3	2	54	15%	20	25%	21	41%
4	2	55	25%	6	83%	15	0%
5	1	39	0%	41	5%	25	99%
6	1	72	8%	9	44%	19	11%
7	1	79	0%	64	6%	23	69%
8	1	40	3%	58	52%	21	56%

# Dropping N isn't gibb-erish

Can gibberellic acid be used to reduce nitrogen fertiliser, without negatively affecting pasture supply? Kieran McCahon, DairyNZ farm systems specialist, explores the options.



With new restrictions on synthetic nitrogen (N) fertiliser taking effect this season, many farmers are searching for opportunities to reduce N fertiliser without compromising their profitability. One potential option is gibberellic acid (GA<sub>3</sub>).

GA<sub>3</sub> is a naturally occurring hormone involved in regulating plant growth. When applied to pasture, it mobilises stored energy reserves, stimulating growth.

Dry matter (DM) responses are affected by the natural levels of GA<sub>3</sub> in the plant, which are strongly influenced by season. GA<sub>3</sub> is typically applied in late winter/early spring, to pull feed forward ahead of balance date, or in mid- to late autumn, to increase feed supply and extend lactation.

When soil moisture and nutrient levels are not limiting, initial DM responses typically range from 200kg to 500kg DM/ha at about four weeks after application.

## Potential lag effect

However, there's some evidence to suggest that GA<sub>3</sub> can cause a reduction in pasture growth rate in subsequent grazing rotations. The reasons behind this aren't fully understood, but reduced tillering and/or root growth are possible causes.

The evidence is conflicting on whether this lag effect can be influenced by N fertiliser or grazing management. Be aware of the potential for this reduced growth in future rounds, and factor it into your feed planning and management.

Despite any lag effect, net DM responses to GA<sub>3</sub> are generally positive. This means, depending on your current N use, you may be able to achieve the same growth rate by applying less N fertiliser when using GA<sub>3</sub>.

## Strategies for applying GA<sub>3</sub>

To minimise any potential lag effect, GA<sub>3</sub> should not be applied to N-deficient pastures. GA<sub>3</sub> is a growth promotant, and not a substitute for optimal soil nutrition. Hence, there's a limit to the amount of N fertiliser you can replace without causing a reduction in pasture growth.

A plausible strategy may involve applying half the rate of N normally applied, in combination with GA<sub>3</sub>, for one round pre-balance date, then again for one round in late autumn. Although the opportunities to reduce N use through this approach are relatively small, it may be enough for those currently applying just above 190kg N/ha, or who are operating just above their N-leaching limit. If greater reductions are required, additional strategies, such as changes to grazing management, may be necessary.

To read more about GA<sub>3</sub>, check out [dairynz.co.nz/GA](https://dairynz.co.nz/GA)

## Key points

1. GA<sub>3</sub> can influence pasture growth.
2. It has the potential to replace some N fertiliser in early spring and late autumn.
3. It's not a silver bullet though, because there's a limit to how much N can be replaced.





## FVI research: latest results

How does DairyNZ's Forage Value Index (FVI) perform under realistic farm management conditions?

That's what we've been investigating through a three-year, levy-funded research programme, and we've put the latest results up for you to see at [dairynz.co.nz/fvi-research](http://dairynz.co.nz/fvi-research)

The FVI categorises cultivars into five 'star rating' groups in each dairy region. Those with a higher star rating are expected to deliver greater economic value for dairy farmers.

The research, which began in 2018, is evaluating whether the differences between the high- and low-star cultivars emerge as expected and translate into profit rankings that match their relative FVI positions.

## Covering all bases

Bay of Plenty contract milker Bridie Virbickas has found a novel way to show a little extra care to her calves, and we thought it was a great tip to share.

Once a year, Bridie heads to town and buys up large on dog coats.

"So, my calves have cute little grey puffer jackets with silver dots on them. Any calf that's born in the rain and is really cold, or is having a bit of a tough time, they'll get a dog coat for a couple of days until they're sorted, before it goes to the next calf that needs it," says Bridie.



*Bridie Virbickas uses dog coats as calf covers.*



## BEEF + LAMB LEVY VOTE

**VOTING WILL SOON OPEN FOR BEEF + LAMB NEW ZEALAND'S SIX-YEARLY BEEF LEVY REFERENDUM, AND DAIRY FARMERS ARE ELIGIBLE TO VOTE.**

### Why should you vote?

Dairy farmers are significant funders of Beef + Lamb New Zealand's dairy-beef activities, paying more than **\$5 million** in levies each year through cull cows and other animals sent to meat processors. It's important you have your say to ensure your views are heard.

During the last referendum in 2015, only **15%** of eligible dairy farmers voted, compared to **47%** of eligible beef farmers.



### HOW TO REGISTER

Unlike the DairyNZ levy vote, you will need to register your details if you want to vote. It's a quick and easy online process – simply visit [beeflambnz.com/register](http://beeflambnz.com/register)

### VOTING DETAILS

Once you register, you will receive a voting pack with details of how to vote. It just requires a simple 'yes' or 'no' on whether you support a beef levy.

For more information visit [beeflambnz.com](http://beeflambnz.com)

**VOTING IS OPEN FROM JUNE 1 TO JULY 9, BUT IT'S NOT TOO LATE TO REGISTER.**



**PROTECT  
OUR FUTURE.**

### Biosecurity Response Levy unchanged

The Biosecurity Response Levy rate for the 2021/2022 season will remain at the same rate of 2.4 cents per kilogram of milksolids. This levy, separate from the DairyNZ milksolids levy, funds the *Mycoplasma bovis* Programme. DairyNZ collects it via the dairy companies, but it is passed directly to the Ministry for Primary Industries. Learn more at [dairynz.co.nz/biosecurity-response-levy](https://dairynz.co.nz/biosecurity-response-levy)



# GETTING HOME SAFE

They're quick and easy, but these two simple things can massively help to reduce the chance of an accident or fatality on your farm this season.



## 1. Check your tyre pressure

Having uneven pressure between tyres is a major contributing factor to farm accidents. It makes vehicles unpredictable and more difficult to control, which increases the chance of rolling.

This year, FMG is offering farmers **free digital tyre pressure gauges**, along with supporting information, to encourage farmers and staff to regularly check their tractor, motorbike, quad, and side-by-side tyres.

Go to [fmg.co.nz/tyre](https://fmg.co.nz/tyre) to register for your free gauge (limited numbers available).



## 2. Buckle up

Not wearing a seatbelt was the largest single contributing factor to four-wheeled vehicle fatalities on Kiwi dairy farms between February 2020 and January 2021. That's why Worksafe and DairyNZ have teamed up to encourage farmers to buckle up every time they get into a farm vehicle, whether it's a side-by-side, ute, or tractor.

Taking just a few seconds to strap in could be the difference between a sore neck and a broken one – or worse.



You'll be seeing these two key messages promoted by DairyNZ, NZ Young Farmers, Worksafe and FMG this season. Please share them with your staff and other farmers.



# Animal health plans – embracing the change



Why do we need animal health plans, and what does good look like? Find out from Jane Lacy-Hulbert, DairyNZ's senior solutions and development specialist.

Most dairy farmers are becoming familiar with animal health plans. Developed with your vet, these plans provide a valuable tool for figuring out how best to look after your animals, the beating heart of any farm business.

Animal health plans reinforce the responsible use of antibiotics. They provide an agreed way to manage and prevent ill-health, which reduces the need for antibiotics. Less use of antibiotics in agriculture preserves the viability of antibiotics for human medicine, so this is why many vets now incorporate animal health planning into their prescribing and authorisation process.

Animal health plans also provide a mechanism to improve consistency and communication across your farm team. This in turn leads to fewer animals requiring treatment and, for animals that do get sick, a more consistent approach in the way they are treated.

Most dairy companies are incorporating animal health plans into their quality assurance and incentive schemes, to demonstrate how their farmers provide world-leading animal care and provide high quality, sustainable food to the consumer. With the sector's increasing drive to reduce greenhouse gas emissions, less disease and ill-health will support efficient milk production by every animal.

## What does good look like?

The simplest plans outline the current and target incidence of common disorders such as mastitis and lameness, annual mortality rates, agreed interventions for thin cows, and a plan for when to get help.

More comprehensive ones can include:

- **prevention plans** including vaccination and dosing schedules to prevent common diseases and disorders
- **mitigation plans** for adverse weather, heat and cold stress
- **monitoring plans** for growth of youngstock, as well as health of adult stock
- **treatment plans** for sick animals, and recording of diseases and negative welfare events.

The Animal Wellbeing Plan that's part of Fonterra's Co-operative Difference programme is one such example. It



Work with your vet to develop a prevention and management plan appropriate for your farm.

extends beyond animal health to cover nutrition, mitigating environmental challenges, and supporting cows to express natural behaviours.

## How do I create one?

Your vet is the first port of call – they can help you set up a plan that works for your farm. Online versions or apps are also available from some animal health companies.

By having a more organised plan, you can review your progress and make adjustments, year on year. The trick is to start small and find a way to make recording details part of your daily habit.

## Key points

- Animal health plans demonstrate our commitment to good animal care.
- They support the sustainable and responsible use of antibiotics.
- Work with your vet to develop a plan personalised for your farm.





NDDT farm manager Kelvin Horton, Trust co-ordinator Kim Robinson and science manager Chris Boom seen in April, inspecting open ryegrass pastures decimated by the hot dry summer.

# All systems go on pasture trial

Northland farmers are hoping a new levy-funded research project will provide solutions to regional pasture challenges.



Climate change's negative effects are making themselves felt on Northland farms. Increased summer temperatures and prolonged droughts are affecting the performance of ryegrass pastures. That's raising questions about ryegrass's ongoing productivity in a warming climate.

### Wanted: ryegrass alternatives

The exciting news is that a range of alternative pasture species are now being put to the test through a four-year farmlet trial, called Future Farm Systems in Northland. Kicking off on June 1 2021, it will compare three farm systems to see whether they can adapt to, or mitigate, climate change effects:

- 1 Current Farm (control) – ryegrass/Kikuyu pasture with imported feed (PKE) to fill feed deficits. Stocking rate around 3.1 cows/ha and up to 190kg N/ha.
- 2 Alternative Pastures Farm – over 70% of pastures in fescue, cocksfoot, legumes and herbs with imported feed (PKE) to fill feed deficits. Same stocking rate as the control farm and up to 190kg N/ha.
- 3 Low-Emissions Farm – Existing ryegrass/Kikuyu pasture. Targeting a 25% reduction in methane emissions and 50% reduction in nitrous oxide emissions (compared to the control farm). Stocking rate around 2.1 cows/ha and zero N/ha.

Run at the Northland Agricultural Research Farm (NARF), the systems will be tested under a range of climatic conditions. When the research starts, pastures on the Alternative Pastures Farm will

have a mix of 15-month-old and three-month-old pastures.

Each system will be compared for cow and pasture performance, people wellbeing (labour input and management difficulty), environmental impact, and profit.

DairyNZ senior scientist Jane Kay says the research results will be relevant to other areas in the country facing similar challenges.

"The findings will help us identify forages that perform better under changing climate conditions, test the resilience of these systems and give us an understanding of how we manage them."

### Who's involved?

This project was initiated and is managed by the Northland Dairy Development Trust (NDDT) with support from NARF.

The two main funders of the project are the Ministry for Primary Industries (Sustainable Food and Fibre Fund) and DairyNZ.

Fortnightly updates will be published on the [nddt.nz](http://nddt.nz) website, Facebook page, and via email. If you wish to receive the email updates, register at [info@nddt.nz](mailto:info@nddt.nz)

Also, read more about the trial at [dairynz.co.nz/regional-projects](http://dairynz.co.nz/regional-projects) or contact **Kim Robinson** on **0274339465**.

See page 24 for June field day details.

# June events

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	<b>02 LOWER NORTH ISLAND</b> Feeding crops this winter? Find out how to minimise soil losses and achieve good animal performance at a workshop in Pahiatua. Details from Janine Swansson, 027 381 2025.				6	7
8	9	<b>10 NORTHLAND</b> A field day is on at NDTT's Northern Agricultural Research Farm, with guest speakers and a discussion on the farm's supplement trials. Register with Hamish Matthews 021 242 5719.			13	14
15	<b>16-19 WAIKATO</b> Visit DairyNZ's site in the main pavilion at Mystery Creek, Hamilton for National Fielddays 2021. Talk to our team and visiting experts about how we can help you to sustain success on-farm.				20	21
<b>22/23 CANTERBURY/NORTH OTAGO</b> Calving's the focus at the South Island Dairy Event 2021 ( <a href="http://side.org.nz">side.org.nz</a> ) at the Ashburton Trust Event Centre. Enjoy sector expert insights, networking sessions and practical workshops.			25	26	27	28
29	30	31	31	30		

TO SEE WHAT ELSE IS HAPPENING IN YOUR REGION DURING JUNE AND JULY, GO TO [DAIRYNZ.CO.NZ/EVENTS](http://DAIRYNZ.CO.NZ/EVENTS)

## WAIKATO

DairyNZ will be at the National Fielddays (June 16 to 19) as it returns for 2021 after a year off due to COVID-19. As usual, we'll be in the main pavilion at Mystery Creek, with our focus this year on helping you sustain success on-farm. Make sure you pop in for a cuppa and say hello!

For more on the Fielddays and how to buy tickets, check out [fielddays.co.nz](http://fielddays.co.nz)

## TARANAKI

If you're on Facebook, join us on the Taranaki DairyNZ closed Facebook group, which has attracted more than 200 members since it was started last year.

This is a closed, safe environment for local discussion about industry, on-farm concerns, or just general updates. We encourage you to post questions and concerns to get some discussion flowing. Join now at [facebook.com/groups/taranakidnz](https://facebook.com/groups/taranakidnz)

## BAY OF PLENTY

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

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

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

## LOWER NORTH ISLAND

The Horizons One Plan Change decision (PC2) was released recently. If you're unconsented, we recommend you engage a trusted adviser to prepare your consent application early. We've got plenty of information and FAQs on our 'Horizons One Plan – information for farmers' webpage, which should help answer any questions. Visit [dairynz.co.nz/horizons](http://dairynz.co.nz/horizons)

## DairyNZ consulting officers

North Island – Head: Rob Brazendale 021 683 139

### Northland

#### Regional Leader

Far North	Leo Pekar	027 211 1389
Whangarei West		
Lower Northland	Hamish Matthews	021 242 5719

### Waikato

#### Regional Leader

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

### Bay of Plenty

#### Regional Leader

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

### Taranaki

#### Regional Leader

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

### Lower North Island

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

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

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

### Southland/South Otago

#### Regional Leader

Western Southland	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

## DairyNZ directors

Jim van der Poel	021 848 484
Elaine Cook	027 223 2049
Colin Glass	027 486 4064
Jacqueline Rowarth	027 694 4334
Peter Schuyt	027 557 4242
Jo Coughlan	021 522 142
Tracy Brown	027 291 1716
Mary-Anne Macleod	021 923 332

## TOP OF THE SOUTH/WEST COAST

Mark and Measure is a three-day course to help you learn key business concepts and skills, and gain confidence to achieve your unique picture of personal and business success. Register now for our special West Coast event in Greymouth from June 29 to July 1 – [dairynz.co.nz/markandmeasure](http://dairynz.co.nz/markandmeasure)

## CANTERBURY/NORTH OTAGO

This year's South Island Dairy Event (SIDE) will be held in Ashburton on June 22 and 23. SIDE 2021 will include a wide range of farmer-focused sessions and workshops, including several run by DairyNZ. We'll be addressing some of the biggest calving challenges on-farm through two workshops: 'Getting calves off to a great start' and 'The future for bobby calves – opportunities to add value and rear bobbies beyond weaning'.

Get the full event details, including networking sessions and practical workshops, and book your ticket now at [side.org.nz](http://side.org.nz)

## SOUTHLAND/SOUTH OTAGO

We've updated our website with several new wintering resources for 2021. Check out the new checklist you can use to spot any improvements before winter arrives, and the new Winter Grazing Plan, which includes a paddock plan and farmer tips. The plan will help you document your actions and share them with your team. Download the checklist and winter grazing plan online at [dairynz.co.nz/wintering](http://dairynz.co.nz/wintering)

We're also providing support through a wintering hotline. If you see something that doesn't look right, call **0800 FARMING**. Calls are confidential. Sector representatives in the local area will visit the farm and work with the farmer to address any issues.





# LIVING BELOW THE FEI THRESHOLD

## – 2018/19 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 2, while Year 1’s research was covered in our previous issue of *Inside Dairy* (April/May 2021).**

For farmers who 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 increasing 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 PKE. This research aimed to answer some of the questions.

### Research overview

In Hawera, South Taranaki, Dairy Trust Taranaki (DTT) compared a farmlet feeding PKE with a farmlet that

### Key points

- Feeding cows a similar amount of a meal blend, instead of straight PKE, reduced the FEI.
- Although the meal blend was more expensive than PKE, farm profitability was not impacted.
- Reducing the stocking rate and removing PKE entirely also reduced the FEI, but there was a reduction in profit.

replaced PKE with alternative supplementary feeds, and a farmlet that removed PKE entirely, had a lower 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 (*previous article*).
- Year 2 (2018/19) – where a meal blend replaced PKE (*this 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’ Sustainable Farming Fund, and DairyNZ farm systems research programme, called Future-Proofing Dairying in Taranaki.

### Farmlet comparisons – Year 2

At the DTT Gibson Farm in Hawera, two 24ha farmlets were stocked at 3.3 cows/ha (79 Friesian cows) with imported



**Table 1.** Average (across the season) and range of meal blend components (% dry matter) offered to the BLEND farmlet.

	PKE	DDGs	Tapioca	Wheat pellets	Maize grain	Lime flour	Magnesium oxide
Average	47%	24%	16%	10%	4%	1%	1%
Range	33-50%	0-38%	11-16%	0-22%	0-33%	0-2%	0-1%

supplementary feed. One 24ha farmlet was stocked at 2.9 cows/ha (69 Friesian cows) and did not import any supplementary feed.

- **Farmlet 1 (PKE)** offered PKE (600kg DM/cow/year) via troughs in the paddock when pasture supply was less than herd feed demand.
- **Farmlet 2 (BLEND)** offered a meal blend (612kg DM/cow/year) via an in-shed feeding system when pasture supply was less than herd feed demand.
- **Farmlet 3 (PASTURE)** relied on home-grown pasture.

The meal blend consisted of 33 to 50% PKE combined with varying quantities of dried distillers' grains (DDGs), tapioca, wheat pellets, and maize grain (Table 1) to target a greater starch content during spring, and greater protein content during summer. 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. Planned start of calving was the same between farmlets.

### Living within the FEI

Offering a meal blend instead of straight PKE lowered the FEI when the same amount of supplementary feed was offered, while removing PKE from the farm system lowered the FEI even further. The six-day rolling average FEI for the PKE, BLEND, and PASTURE farmlets is presented in Figure 1. The PKE farmlet had five days in the 'C' band but, due to the implementation of the FEI grading system for demerits, did not have any demerits applied. In contrast, the BLEND and PASTURE farmlets remained within the 'A' and 'B' bands.

Spikes in FEI occurred in late summer and early autumn. During this time, pasture was 100% of daily dry matter intake (DMI) at the start of January but then decreased to approximately 30% in the middle of March, in both the PKE and BLEND farmlets.

At the same time, the DMI proportion of imported supplementary feed (i.e. PKE or meal blend) increased from 0% to a maximum of approximately 30%, with the remainder of the diet balanced with silage. As expected<sup>1</sup>, when the proportion of PKE in the diet increased, there was a subsequent increase in FEI.

These results demonstrate that, during the 2018/19 season,

the amount of supplementary feed offered (both PKE and meal blend) was determined by the feed budget, rather than restricted by the FEI grading system.

This means there was room within the FEI grading system to increase the amount of supplementary feed offered; more so in the BLEND farmlet due to the lower FEI. However, this



DairyNZ Master's student Jake Jarman (the author) with Dairy Trust Taranaki operations manager Debbie McCallum.



Farmlet 3 was stocked at 2.9 Friesian cows/ha and relied on home-grown feed.



Dairy Trust Taranaki's 110ha (effective) Gibson research farm near Hawera, South Taranaki, where this research was completed.

would most likely decrease the MS production response and increase the marginal cost<sup>2</sup> – both critical factors to profitable supplementary feeding.

### Biophysical performance

Annual pasture growth was 15.8t DM/ha and cows were milked for 288 days in all three farmlets. The BLEND farmlet produced 3% more milksolids (kg MS/ha) compared with the PKE farmlet. This was mainly due to offering slightly more supplementary feed (2020kg DM/ha versus 1980kg DM/ha) and having less wastage when feeding in-shed compared with using troughs in the paddock. Importing no supplementary feed and having a lower stocking rate meant that MS production was approximately 20% less in the PASTURE farmlet compared with the other two farmlets.

We recorded a MS production response to supplementary feeding of 140g MS/kg DM and 160g MS/kg DM more in the PKE and BLEND farmlets, respectively, compared with the PASTURE farmlet. This is 50% to 100% greater than previous experiments<sup>3</sup> and the 12-year DairyBase ([dairynz.co.nz/](http://dairynz.co.nz/) DairyBase) average<sup>4</sup> (approximately 80g MS/kg DM).

A major driver of this large response was genuine feed deficit imposed by the comparative stocking rate (CSR) employed. The CSR on all three farmlets was greater than 90kg liveweight/t DM<sup>5</sup>, which was greater than the advocated optimal of 80 to 85kg liveweight/t DM<sup>5</sup>, and meant there were periods when there was a large pasture supply deficit.

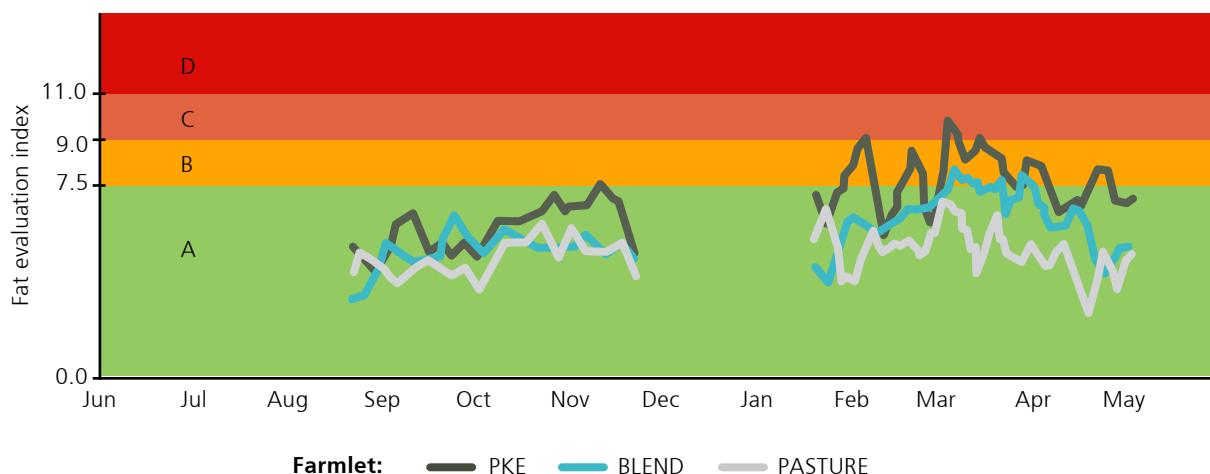
Strict feed management decision rules resulted in supplementary feed being offered only to fill these genuine feed deficits, so pasture substitution was minimised and there was a large response to this feed.

### Profitability

We estimated differences in profitability between farmlets. 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 couldn't be determined. We then completed economic modelling, accounting for changes in milk and supplementary feed prices, to evaluate the likely long-term profitability of the three farmlets (Table 2).

We used an average milk price of \$6.44 ± 1.65/kg MS, PKE

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



**Table 2.** Production and profitability of the PKE (3.3 cows/ha offered PKE), BLEND (3.3 cows/ha offered a meal blend), and PASTURE (2.9 cows/ha offered pasture only) farmlets.

2018/19 season at \$6.44/kg MS					
Treatment	FEI	Imported supplements	Production		Profit
	FEI average	kg DM/ha	kg MS/cow	kg MS/ha	\$/ha
PKE	6.8	1980	459	1510	\$4570
BLEND	5.1	2020	473	1555	\$4650
PASTURE	4.8	0	429	1232	\$4160

price of \$289 ± 42/t, and meal blend price of \$399 ± 59/t in the analysis.

On average, total revenue was approximately 20% greater in the PKE (\$10,230/ha) and BLEND (\$10,570/ha) farmlets compared with the PASTURE (\$8450/ha) farmlet due to their greater MS production and stocking rate. Because meal blend was more expensive than PKE, the BLEND farmlet's operating expenses were the greatest (\$5920/ha), 4% higher than the PKE farmlet (\$5660/ha) and 38% higher than the PASTURE farmlet (\$4280/ha).

The marginal cost of supplementary feeding was \$4.95/kg MS and \$5.04/kg MS in the PKE and BLEND farmlets, respectively; hence, supplementary feeding contributed to profit (this analysis does not include capital costs, e.g. it assumes an in-shed feeding system is already in place).

Overall, there was no difference in operating profit between the PKE and BLEND farmlets (approximately \$4600/ha), while operating profit was 9% less in the PASTURE farmlet (\$4160/ha). When accounting for variability in milk price and supplementary feed costs, the PKE and BLEND farmlets were more profitable than the PASTURE farmlet in 90% of scenarios, but the PASTURE farmlet was more resilient to lower milk prices (less than \$5.00/kg MS).

### Research conclusions (Year 2)

In summary, in the 2018/19 season, there was no difference in profitability of using a meal blend, fed through an in-shed feeding system, compared with a similar amount of PKE fed out in trailers. Although the meal blend increased the marginal cost of supplementary feeding, it did lower the FEI. Reducing the stocking rate and removing PKE in the PASTURE farmlet lowered the FEI, but it also reduced MS production and profitability.

Importantly, the relative success of the PKE and BLEND farmlets, compared with the PASTURE farmlet, was dependent on the large response to supplementary feed. A large response can be achieved when following best management practices. However, if supplementary feeding is done poorly and the response decreases, the marginal cost can easily exceed the milk price, resulting in reduced profit.

You can read part one of this article in our previous edition of *Inside Dairy* (April/May 2021) at [dairynz.co.nz/insidedairy](http://dairynz.co.nz/insidedairy)

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

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