

Inside Dairy

February 2019

Your levy in action

GENETICS: MAKE EVERY DOLLAR COUNT

FVI traits hone cultivar selection

Ryegrass energy and
persistence now in the mix

Teaming up in Taranaki

New Taranaki CO's goals for
farmers and footie

DairyNZ



over the fence...

I hope you all had a chance to take some time out to enjoy Christmas and the New Year, and perhaps even a chance to get away from the farm for at least a few days. I know – the cows still need to be milked.

This issue of *Inside Dairy* is all about breeding, both of cows and pasture. Find out about the financial and environmental benefits of genetic improvement and how our key breeding indexes, Breeding Worth (BW) and Forage Value Index (FVI), support this. Both these indexes are robust and validated but we're continuing to improve them – read on to learn how.

In our lead story, Southland farmers Simon and Mo Topham tell us why and how they've designed a more cost-effective breeding plan. They're seeing great results, including a healthier and more resilient herd, thanks to genetic gain.

You should have received, or be about to receive, a yellow pack in the post asking for your feedback on how we pay for the *Mycoplasma bovis* (*M. bovis*) response. Please take the time to read the information and let us know your thoughts by either posting the hard copy or popping online – it's very quick. Head along to one of meetings being held across the country to answer your questions. Read more on page 22.

This consultation follows the announcement in December about how we are splitting the costs of the *M. bovis* response. The Government is funding 68 percent of the response, and dairy approximately 30 percent (or 94 percent of the remaining 32 percent), with beef and lamb picking up 2 percent (or 6 percent of the 32 percent). An independent panel determined the model for this split and you can watch a short video on how they came to this number at dairynz.co.nz/mbovis

And if you haven't already, please tune into The Hits radio station to hear our 'Vision is Clear' campaign, asking people to send in photos of their favourite waterway. This upbeat promotion is all part of DairyNZ's work to engage with the public on waterways. We're encouraging every Kiwi to do their bit, inspired by the work you do to look after your on-farm waterways.

It's always a pleasure to hear from you, so please email me with any feedback – tim.mackle@ceo.dairynz.co.nz

Tim Mackle
Chief executive
DairyNZ



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After playing semi-professional rugby while dairying overseas, Nathan Clough is happy to be back in New Zealand as Taranaki's new CO.

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

ISSN 1179-4909

DNZ03-200



On the cover: When the first low payout season hit, Simon and Mo Topham upped their game around their breeding programme.

TAKE 5... TIPS FOR FARMERS

1. Have your say and win
DairyNZ's May issue of *Inside Dairy* will be shaped by you! We want to hear what you'd like covered in this 'farmer take-over' issue. After all, it's your magazine. Tell us your ideas and you'll go in the draw to win a Honda XR150, kindly donated by Honda. Complete the form at dairynz.co.nz/win



2. Zinc-up for facial eczema
Did you know 70 percent of New Zealand cows being given zinc are not getting enough to protect them against facial eczema (FE). Blood test your cows to ensure they're getting enough zinc and don't stop FE management until spore counts in the paddocks your cows are grazing are below 10,000. Visit dairynz.co.nz/facial-eczema

3. Quickstart for temporary staff

Many farmers employ short-term staff while searching for the right person for a permanent position on-farm. That's a great stop-gap, but you still need the employment basics in place for anyone starting employment. See our 'Quickstart' people publications at dairynz.co.nz/employer

4. Transporting cull cows
Cull cows that are still making milk experience low blood calcium and are at high risk of going down during transport or in holding yards. Reduce the risk by supplementing with calcium on the day of transport, and by choosing the closest processor/destination. Learn more at dairynz.co.nz/transporting-stock

5. Daylight savers at BBQ time



Get everyone home in time to 'fire up the barbie' this summer, by upping your milking efficiency (MilkSmart, particularly MaxT, can save at least an hour a day), changing your milking times over summer, and/or moving to once-a-day milking. It'll make a big difference to you and your employees' wellbeing. See dairynz.co.nz/milksmart

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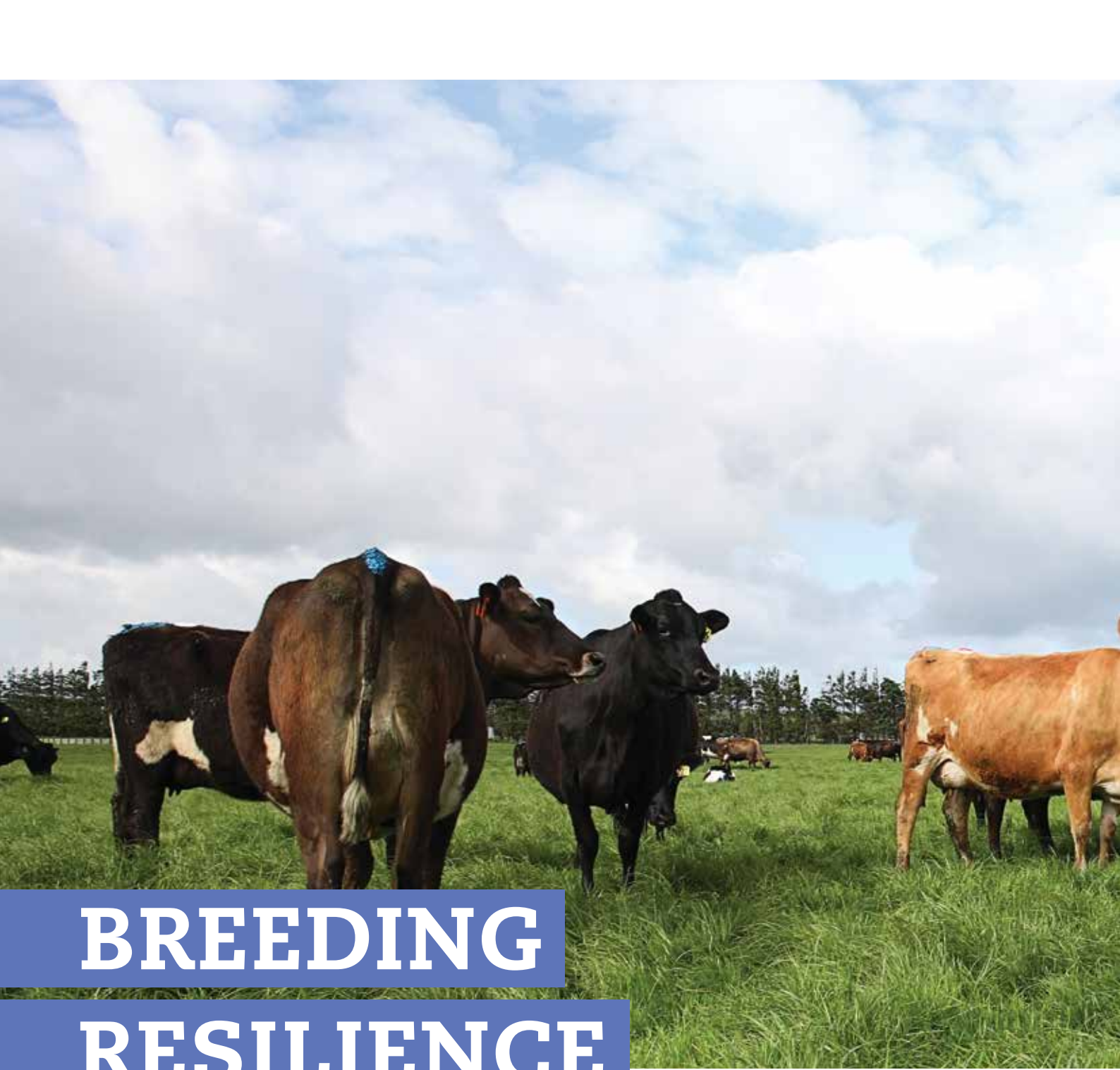


We appreciate your feedback

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



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BREEDING RESILIENCE PAYS OFF

Southland farmers Simon and Mo Topham have always taken genetics seriously, but especially so when milk prices took a dive in 2014/15. As they sought to make every dollar count, the couple put all aspects of their business under the microscope – including their breeding programme.



"WE WENT THROUGH OUR ENTIRE HERD AND CREATED TWO GROUPS: THE GOOD COWS, AND THE NOT-SO-GOOD COWS (CHRISTENED 'THE MOTLEY CREW')."

Starting out

When Simon Topham began sharemilking in 2009, he bought 300 cows to make up his core herd. These cows had good conformation, Breeding Worth (BW), Production Worth (PW) and records. He also leased some first-time calvers. The rest of the herd was a mixed bag of cheaper cows that he planned to keep for a year or two. Over the next five years, Simon worked to build up the size of his herd and improve its quality.

It was during this time that Mo moved to Southland to start working as a trainee consulting officer for DairyNZ. A colleague gave her Simon's details, suggesting he'd be a useful go-to farmer for local advice. It turned out they were a perfect match – the pair married in February 2016.

The elites and the 'motley crew'

When the first low payout season hit, the Tophams looked at how to design the most cost-effective breeding plan. At the time they were doing six weeks of artificial insemination (AI) and six weeks of natural mating.

The couple looked at a number of scenarios, including both increasing and decreasing their use of AI.

"In the end, we went through our entire herd and created two groups: the good cows, and the not-so-good cows (christened 'the motley crew'). This mob was made up of 75 cows (15 percent of the herd) that we didn't want to keep heifer calves from," explains Mo.



Simon chats with second-in-command Dave Milford, on a break from spreading urea.



Mo's passion for herd genetics has seen her recently join the New Zealand Animal Evaluation Farmer Advisory Panel, which advocates for genetic improvement.



Genetic gain has resulted in the Tophams' herd becoming healthier and more resilient.

FARM FACTS

Simon and Mo Topham

LOCATION: Hedgehope, Southland

FARM SIZE: 176ha (effective), 90ha leased runoff

HERD SIZE: 515 Friesian-Jersey cross

PRODUCTION: 248,000kg MS (targeting 250,000 this season)

BW: 101

PW: 130

FWE: \$3.29 per kg/MS last season, including wages.

These cows were chosen based on somatic cell count (SCC), feet, udders, general conformation, BW, PW and calving date. The animals were run with Angus-Hereford bulls for the entire mating. In the second cycle, the Tophams identified another 15 percent of the herd and added them to the 'motley crew'. For this group, Simon and Mo were happy to keep the progeny only if they got in calf in the first cycle and, therefore, had good fertility. Doubling the size of the 'motley crew' in the second three weeks meant the natural mating bull team was maximised, AI costs were minimised, and the workload on-farm was reduced because there was less time spent picking in-heat cows.

"Admittedly, we did this for only one year," says Mo. "We became less picky from then on. We used Angus-Hereford cross bulls to identify the non-dairy calves at birth. Our herd

leans towards Jersey, so some calves came out tiger-striped, and weren't that easy to sell, but we managed to sell a good number to family and others in the area."

Don't waste good money

One of Simon and Mo's biggest surprises was seeing far fewer beef calves born than expected. This was because the cows in the 'motley crew' were of lower fertility (mastitis, late calvers etc.), so a lower percentage got in calf. Apart from cows in the elite herd that didn't get in calf, the culled cows all came from the 'motley crew'.

"We've now realised that it's a waste of money to put a straw of good semen into a bad cow that we'll eventually cull. So, if we use bulls or cheaper AI straws, we save money in the short term and get better replacements in

the long term. All in all, we have fewer poor-quality heifers coming into the herd," says Simon.

"We have one animal that's full Jersey and one that's full Friesian and everything else is somewhere in between. Our herd averages about 500 kilograms (kg) liveweight – that suits our shed. We don't want animals that are completely different sizes because that can be tricky to manage."

The Tophams' idea of a robust herd is one whose cows are producing 100 percent of their liveweight, have no mastitis or no lameness, and get in calf without intervention.

Seeing improvements

Simon and Mo lease a family farm and are investors in an equity partnership. On their own farm, they run a 515 spring-calving herd. The couple's assets are similar to a 50:50 sharemilker's, so they're mindful of how important it is to maximise the herd's value and saleability, while also maximising its productivity.

"MILKING OAD IS GOOD FOR THE COWS AND EVEN BETTER FOR THE TEAM..."

Genetic gain has resulted in the Tophams' herd becoming healthier and more resilient. Their cows bounce back quickly after short periods of bad weather, without



Mo and Simon use herd management system Minda to record data for Breeding Worth, Production Worth and somatic cell count.

TOP TIPS FROM THE TOPHAMS



- ❑ Don't waste AI on bad cows.
- ❑ Think about the cows you want to be milking in three to 10 years' time.
- ❑ Breed a cow that suits you and your system.



a detrimental effect on the season's production. Simon and Mo have also found that animal health costs lean more towards preventative measures than treatment. SCC, mastitis and lameness have each reduced, contributing to a lower cost of production.

Mo says the other thing they've noticed is that the two-year-old heifers they're bringing into the herd now are much better quality.

"Previously we probably got rid of three or four percent of heifers before December because they didn't milk, or they had horrendous udders or conformation. This season we got rid of one-and-a-half percent. This is all a cost-saving to the system."

Strategic use of once-a-day

The Tophams use a significant amount of once-a-day milking (OAD) in their system. Half the herd goes onto OAD during March and April, and most of the herd in May and August. Simon says this used to be quite detrimental to production, but it's become less so over time.

"At the start of the season, once-a-day reduces stress on the herd and the team so they're fresh when things get really busy in September. The team have more time to ensure jobs are done perfectly and this helps to set up the herd for the rest of the season."



Size consistency: cows in the Tophams' herd average 500kg in liveweight.

Herd management tools

Simon and Mo started DNA testing this year and are looking forward to the improved reliability this will offer. They use herd management system Minda, herd-test four times a year and have Minda data for PW, BW and SCC. The couple use Protrack to record mastitis treatment.

"Mastitis is a work in progress," says Simon. "We had quite a lot when we first started, but it's been tracking down every year. We don't use excessive dry cow treatment. For about two-thirds to three-quarters of the herd, we're only using teat seal. There are many spokes to the mastitis wheel and you need them all to keep the wheel running smoothly. Of course, that's true of farming in general."

The Tophams weigh their young stock at key times of the year to ensure they're at target weight, and they monitor the herd on body condition score.

"In future, we'll probably weigh all our first calvers as part of Livestock Improvement Corporation's (LIC) sire-improving scheme. It will be interesting to see how that affects the BW of those cows," says Simon.

"THE DECISIONS YOU MAKE WHEN SELECTING YOUR BULL TEAM ARE CRUCIAL."



Plan ahead

Mo says it's important to think about the cows you want to milk in the next three to 10 years' time.

"The decisions you make when selecting your bull team are crucial. You spend a lot of time in the cowshed milking cows, so it's worthwhile to breed cows that will achieve the results you want and that are enjoyable to milk."

■ Words: Christine Hartley ■ Photos: James Jubb

Resources

Use DairyNZ's Bull Team Builder tool to create the perfect bull team. Check it out at dairynz.co.nz/bull

Animal management is a critical component of farm profitability and sustainability. To learn more about genetics, herd management and more, visit dairynz.co.nz/animal



Simon and Mo believe a robust herd is one whose cows are producing 100 percent of their liveweight, have no mastitis or no lameness, and get in calf without intervention.

Six steps to High BW herd

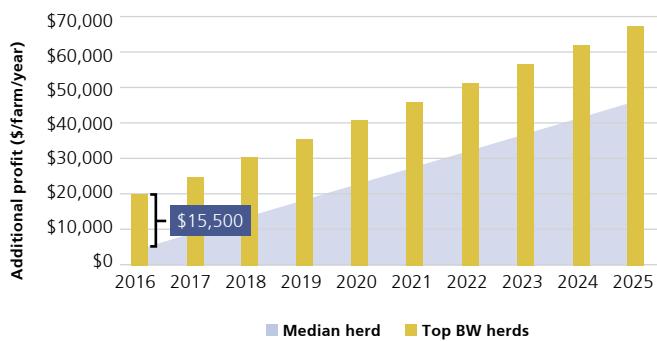
1. Use high Breeding Worth AI sires
2. Keep accurate and detailed calving and mating records
3. Use DNA sire verification if you're unsure about parentage
4. Measure cow performance
herd testing
weighing
calving and mating dates
5. Use AI bulls over your best heifers
6. Target replacements from your top BW cows

WHAT'S THE VALUE OF GENETIC GAIN?

Cows' genetic merit sets the foundation for what the herd can achieve, says New Zealand Animal Evaluation Limited (NZAEL) manager Dr Jeremy Bryant.

"A herd in the top 10 percent nationally is estimated to be generating around \$36 extra profit per cow every year, or \$15,500 extra, when compared to the average herd, if both herds were run under the same conditions."

The cumulative effect of genetic improvement on farm profit
Top 10% herds vs the national median



Note: Values assume an average rate of genetic gain of \$11/year.

Economic values and why they matter



The economic values used to calculate Breeding Worth have been updated to reflect world market changes. DairyNZ genetic evaluation developer Melissa Stephen explains how these values are calculated and why they change.



What are economic values?

Economic values are an estimate of the profit gained from a range of traits that contribute to production, product quality and animal fitness. These values become the weighting factors used to calculate Breeding Worth (BW) for all dairy cattle. BW is the industry index which ranks cows and bulls on their ability to meet New Zealand's national breeding objective: to identify animals whose progeny will be the most efficient converters of feed into farmer profit.

Economic values are calculated annually for milk fat, milk protein, milk volume, liveweight, fertility, residual survival, somatic cell count (SCC) and body condition score (BCS).

How are economic values calculated and why do they change?

Economic values are recalculated every year with input from several organisations, including Fonterra, DairyNZ and meat processors. These revised economic values become the weighting factors used to produce the BW index in February each year.

They are calculated as 'profit per unit', (e.g. the profit gained from one additional kilogram (kg) of protein). These calculations incorporate major expense and revenue streams for an average

New Zealand farm. On-farm expenses and revenues are largely dependent on market conditions, which can shift dramatically over time. Annual updates of BW ensure farmers have the most up-to-date and relevant information available to inform their breeding decisions.

Economic values – factors and effects

1. Milk fat, milk protein and milk volume

These are calculated using a five-year rolling average of the milk solids, volume charge and value component ratio. This rolling average includes three historic, one current and one forecast year. The value component ratio is used to partition the milksolids price into a value for milk fat and a value for milk protein.

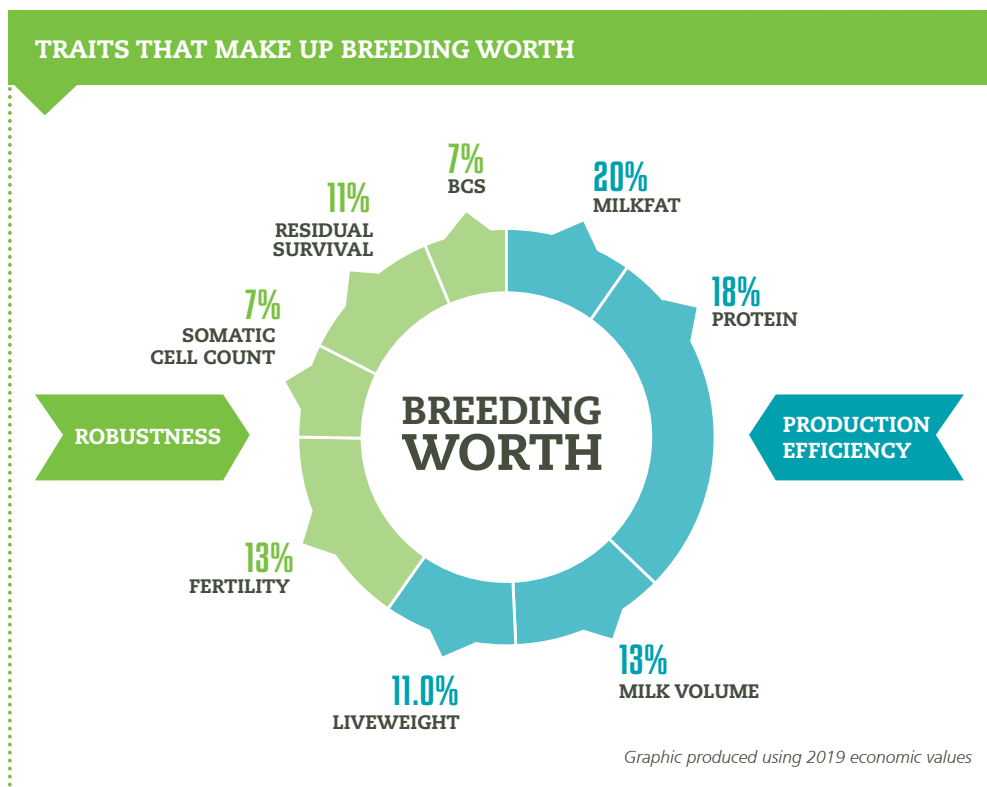
To calculate the economic value of specific milk components, we account for:

- the dollar value of milk components
- the amount of energy required to produce each milk component
- the reduction in stocking rate required to accommodate the extra energy/feed a cow requires to produce additional milk components.

2. Liveweight

Liveweight differences in cows can affect their maintenance requirements, feed costs, value as a cull cow and the value of their calves. The liveweight economic value accounts for:

- cow maintenance requirements – increasing liveweight can lead to higher annual maintenance feed requirements for the cow
- heifer replacement feed costs – feed requirements are higher for maintaining and growing larger replacements
- cull cow value – heavier cows have more value as culls
- surplus calf value – increasing cow liveweight increases the size (and value) of surplus calves produced.



3. Somatic cell count

Differences in SCC can have a significant economic effect. The economic value for SCC accounts for:

- survival – cows with low SCC will survive longer in the herd
- price penalties on milk supplied – low-SCC cows help keep the bulk SCC down, which avoids penalties via grades from milk processors
- mastitis treatment costs – low-SCC cows have fewer cases of clinical mastitis.

4. Fertility

The economic value for fertility includes value gained through increased survival and value gained through earlier calving dates (i.e. longer lactations). The economic value accounts for:

- survival – strong fertility leads to high survivability for early-calving cows, as they have more chance to get in calf the following season (and therefore won't be culled)
- herd calving distribution – cows with strong fertility contribute a much tighter pattern of calving across the herd, and they themselves generally have longer lactations. This value is offset slightly by the cost of increased feed demand in early spring.

5. Residual survival

The economic value for residual survival recognises that animals with better longevity will reduce the requirement for replacement heifers. The economic value accounts for:

- heifer replacements – a herd with higher survival requires fewer replacements. This is offset slightly by the loss of cull cow income and reduced rates of genetic gain.

- costs and revenues per lactation – cows of different ages differ in their contribution to herd profitability. The proportion of mature cows in a herd will impact profitability.

6. Body condition score

The economic value for BCS represents the improved profitability of an animal that can maintain body condition over her lactation. Cows that lose body condition easily incur costs in two key ways:

- Feed efficiency – it's inefficient for a cow to lose condition and then have to gain it again.
- Days in milk – a thinner cow may have to be dried off earlier, reducing days in milk and, therefore, production and profit.

Key points



1. Breeding Worth (BW) changes will be implemented this month.
2. Economic values are the weighting factors used to calculate BW.
3. Annual updates of BW ensure farmers have the most up-to-date and relevant information available to inform their breeding decisions.

Visit dairynz.co.nz/ev to learn more.



New research into better genetics for cow longevity

DairyNZ is partnering in research aimed at developing a new cow survival and longevity trait. This trait will provide greater focus on general robustness and good health, as DairyNZ senior scientist Claire Phyn explains.



DairyNZ and a team of researchers from AbacusBio and New Zealand Animal Evaluation Limited (NZAE) are making significant inroads into developing a new selection index for improved cow survival and longevity genetics.

On average, 21 percent of cows are removed from herds each year. Most of these removals are due to avoidable reasons (mainly reproductive failure, mastitis, and other health- and calving-related disorders). Rearing replacements is costly, and involuntary culling takes away options of culling for very low milk production and temperament.

One strategy to reduce involuntary culling and increase the productive lifetime of dairy cows is to breed animals that are healthier, more fertile and last longer in the herd. That's why we and our research partners under the *Pillars of a New Dairy System* research programme are looking at new ways to evaluate cow longevity traits.

These are traits currently included in Breeding Worth (BW) under the 'residual survival' Breeding Value (BV). Now, the researchers are developing an alternative 'functional survival' BV that better-excludes animal removals due to infertility or low production. This means the trait focuses on genetic selection for cows that are less likely to be culled for health-related reasons.

The 'functional survival' trait differs from the current 'residual survival' trait. It measures cow survival from one lactation to the next (e.g. first to second, second to third, third to fourth lactation etc.). The current trait measures cumulative survival from first to second, first to third, first to fourth lactation etc. The 'functional survival' trait is an alternative way of accounting for culling reasons, as well as the relationships between survival and other traits, all of which change as cows get older.

Several 'traits other than production' (commonly called TOP) have been identified as indirect predictors of functional survival. 'Body condition score' (BCS) traits and 'milking speed' traits are predictors of early survival (e.g. first to second lactation), while the 'udder overall' and 'straightness of rear legs' traits can predict late survival (e.g. third lactation onwards). These TOP are measured during the peak of first lactation and improve the accuracy of genetic evaluations, especially for young bulls before they have any daughter survival records available.

Next, the researchers will evaluate the economic value of the new 'functional survival' trait, determine how it fits with the other BW traits and identify its effects on sire rankings. Watch this space.

Pillars of a New Dairy System is funded by the Ministry of Business, Innovation and Employment, and New Zealand dairy farmers through DairyNZ, with aligned funding from AgResearch. For more information, go to dairynz.co.nz/pillars

Key points



1. Researchers are developing a new trait for improved cow survival and longevity genetics.
2. This 'functional survival' trait aims to better focus on cow survival due to good health and robustness.
3. The trait measures cow survival from one lactation to the next.

FVI gains energy and persistence

From this month, DairyNZ’s Forage Value Index will include two new traits for perennial ryegrass cultivars: metabolisable energy and persistence. Forage value manager Cameron Ludemann explains.



To truly tap into the potential of genetic gain in cattle, our cows must have access to the best feed supply possible. That’s one of the reasons genetic improvement in pasture is so vital.

The Forage Value Index (FVI), set up in 2012, aids the genetic improvement of ryegrasses. It allows dairy farmers to select cultivars of short-term and perennial ryegrass that match their needs, while providing our sector with clear direction for plant breeding.

DairyNZ uses the FVI to independently calculate values based on how well the cultivars perform in trials, and the economic value of that performance. These values follow a ‘star rating’ (one to five) based on each cultivar’s order on the lists, which are published in regionally specific FVI lists and on the interactive Cultivar Selector Tool.



A National Forage Variety Trial at Kirwee, in Canterbury, will contribute seasonal DM yield data to the FVI.

FVI - new traits

Initially, the perennial ryegrass FVI used only seasonal dry matter (DM) yield traits from three-year National Forage Variety Trials (see photo). But we always planned to add metabolisable energy (ME) content and persistence traits to the FVI as soon as we had adequate data.

DairyNZ has invested the levy in many trials to obtain data for these new traits and we’re excited to announce they’ll be included in the perennial ryegrass FVI lists from this month.

Although the ME and persistence traits will initially be based on average performance values across groups of cultivars (that we found conformed similarly in trials), these new traits will still feed into an estimate of FVI for each perennial ryegrass cultivar. As a result, farmers can now select their top perennial ryegrass cultivars based on a combination of seasonal DM, seasonal ME and persistence.

Cultivar group comparisons

For the ME trait, these groups include the mid-heading diploids, late-heading diploids and tetraploid groups. Tetraploids have greater ME content throughout the year compared to the two diploid groups.

Our and others’ trials also found tetraploid cultivars tend to have poorer persistence compared to the diploids. This highlighted the importance of bringing in both traits at the same time when

assessing the overall value of those perennial ryegrass cultivars.

Next, we aim to provide farmers with a more refined assessment of the value of individual cultivars in relation to these traits, so farmers can make better selection decisions.

To learn more about the FVI and to use our Cultivar Selector Tool, go to dairynz.co.nz/fvi

Read about DairyNZ’s Scott Farm FVI systems testing on pages 12 to 13.

For a general description of ryegrass breeding in New Zealand, read pages one to five in our September 2018 issue of *Technical Series* – dairynz.co.nz/techseries

Key points



1. The FVI offers an independent, regionally specific, economic index for ryegrass cultivars.
2. ME content and persistence traits are now included in the perennial ryegrass FVI.
3. These and existing FVI traits should be considered at the same time in any assessment.

Forage tool put to the test

DairyNZ's Forage Value Index is currently being tested to see if it works under realistic farm management conditions. DairyNZ's Cáthal Wims outlines the FVI's latest development phase.



The Forage Value Index's (FVI) ongoing development has been supported by a comprehensive programme of levy-funded research. DairyNZ is now moving the tool into a validation phase, where we'll test if the FVI systems work under realistic farm management conditions.

Why are we doing this?

As explained on page 11, the FVI ranks ryegrass cultivars on their expected economic value to New Zealand dairy farm businesses. To calculate the FVI of a cultivar, two key components are required: the cultivar's performance value for individual traits, and the economic value of those traits to dairy farm businesses.

Sitting behind these components are two key assumptions:

1. That the economic values calculated for pasture performance traits, from the Farmax farm system model, are representative of the true value of those traits to dairy farm businesses.
2. That cultivar performance values, derived from small-plot evaluation trials, adequately capture performance under realistic dairy farm management conditions.

If these assumptions hold under realistic farm management conditions, we have good evidence that the FVI is a robust decision support tool. Essentially, we want to know that the FVI 'does what it says on the tin'.

How are we doing this?

To test the FVI systems, we've taken selected cultivars from the FVI into a farm systems experiment to determine if dry matter (DM) yield performance differences emerge as expected. We can then compare the relative profitability rankings of the cultivars from the experiment with their relative profitability rankings in the FVI. This is akin to the dairy cow strain trials undertaken in the early 2000s to validate and develop animal evaluation indices.

On DairyNZ's Scott Farm, just outside Hamilton, 40 hectares (ha) of pasture were sown to high- and low-ranked FVI cultivars over the past three autumns. The high-ranked FVI cultivars were selected from the five-star rating band in the FVI for the Upper North Island. The low-ranked FVI cultivars were selected from the one- and two-star rating bands. All cultivars were sown



DairyNZ research technician Dagmar Elliott collects pasture samples as part of the FVI systems trial at Scott Farm.

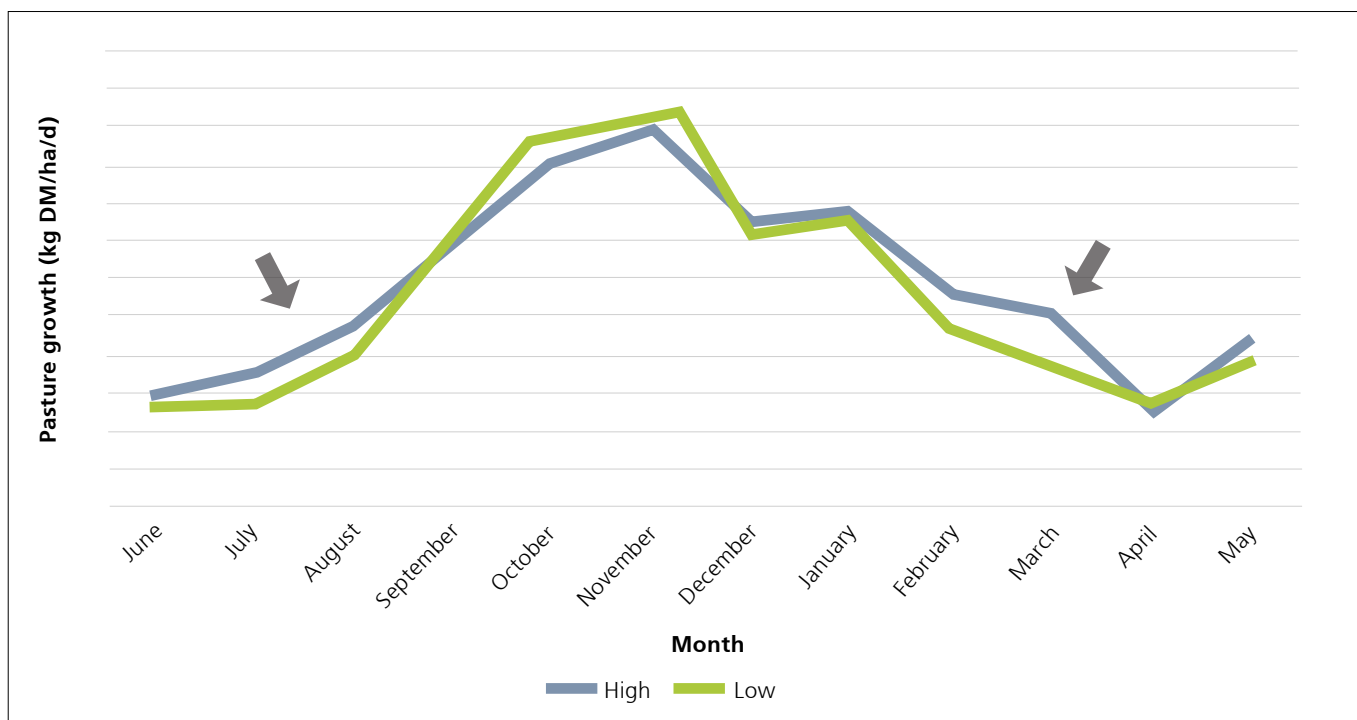


Figure 1: The expected seasonal pasture growth profile for the high-FVI (blue) and low-FVI (green) pasture treatments. Arrows indicate the expected better seasonality of pasture growth for the high-FVI pastures.

with white clover, as is standard farm practice. Low-ranked FVI cultivars were sown on one 20-ha pasture area and high-ranked FVI cultivars were sown on the other, for comparison over three years from June 1, 2018.

Both areas are stocked at 3.5 cows/ha, and will receive 180 kilograms of nitrogen fertiliser annually. Imported feed will be offered only when there's a true pasture deficit to maintain target post-grazing residuals.

Where is the value?

We expect the high-FVI pastures will have a greater total pasture DM yield and better seasonality of growth, i.e. greater growth rates in winter/early spring and autumn relative to the low-FVI pastures (see Figure 1). Modelling results indicate that the more favourable pasture growth curve of the high-FVI pastures will generate \$300 to \$400 of additional operating profit per hectare per year compared with the low-FVI pastures, through a lower requirement for imported feed and, to a lesser extent, more days in milk in autumn.

Data from small-plot evaluation trials also indicate that the high-FVI pastures will maintain better pasture quality in late-spring and early summer, which is potentially worth \$50/ha per year.

Cultivar performance (and consequently, system performance) expectations have been derived from carefully managed small-plot evaluation trials. An important objective of this experiment is to determine if expected differences in cultivar performance from small-plot evaluation trials holds true when cultivars are sown at a paddock scale and managed under realistic farm management conditions.

What will we measure?

Several pasture and animal performance indicators will be measured as part of the experiment. We will measure the seasonal dry matter yield of the high- and low-FVI pastures, and pasture composition and feed quality throughout the year. The milk production of cows grazing the high- and low-FVI pastures will be measured, and cow body condition score will be routinely assessed.

To determine if the profit rankings of the high- and low-FVI pastures correspond with their relative position in the FVI, we'll calculate the operating profit (on a per-hectare basis) of each system, using results for production and the amount of inputs required to maintain target pasture covers and cow body condition scores.

Find out more about the FVI at dairynz.co.nz/fvi

Key points

1. High- and low-ranked FVI cultivars will be compared across two 20-ha pasture areas under realistic farm management conditions.
2. We expect high-FVI pastures to have greater growth rates in winter/early spring and autumn.
3. We'll measure pasture DM yield and the milk production of cows grazing the high- and low-FVI pastures.



Can genetics help to reduce nitrogen leaching?

DairyNZ is about to start on-farm research that aims to breed cattle with a lower nitrogen footprint, writes DairyNZ geneticist Mark Camara.



Living up to our *Dairy Tomorrow* strategy's commitment to 'protect and nurture the environment for future generations' will require some new thinking. That's why DairyNZ is about to kick off on-farm work to investigate the potential to breed cows that do their part naturally.

Partially funded by the DairyNZ Levy, this research is the first step in a seven-year Ministry for Business, Innovation and Employment (MBIE) partnership programme called *Livestock genetics and management to reduce farm environmental impacts*. The aim is to figure out which cow-level characteristics are the best targets for selective breeding to reduce their contributions to farm-level nitrogen (N) leaching ('nitrogen footprint').

theories must be tested against data, so we're casting a wide net in the first phase of our on-farm work.

Teaming up

This is a highly collaborative project, with Massey University, Lincoln University, AbacusBio and AgResearch all playing a role. The first cab off the rank is using high-tech sensors, developed by AgResearch, to directly measure the timing, N content and volume of every urination event of individual cows over four-day trials. At the same time, researchers will genotype (DNA fingerprint) the cows and measure the N content of their milk and blood, how much pasture they consume, and the N content of that pasture.

The cows have been chosen to represent a wide range of sires for which breeding values for milk urea N content are available. This will help to maximise the statistical power available to DairyNZ and Massey University geneticists to identify genes that control these traits and the genetic relationships between them, particularly milk and urinary N adjusted for diet.

Data will be used to:

- find out if selection on milk urea N will impact urinary N
- investigate alternative cow-level traits that might do a better job
- look for genetic trade-offs with production and health traits
- determine (using models) which cow-level traits have the strongest connection to farm-level N losses.

The ideal trait for selective breeding would be easy to measure, under strong genetic control, a key driver of farm-level leaching, and have no trade-offs with economically important traits. Milk N is a promising candidate, but time, and data, will tell.



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

From theory to practice

Preliminary research has shown the amount of N in a cow's milk and urine both respond to dietary N, and that milk urea N concentration is partially controlled by genetics. The initial theory is that selection to reduce milk urea N content (cheaply measured as part of herd testing) will also reduce urinary N. However, our

Key points



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

1. Developing genetically low N-footprint animals.
2. Offering breeding and management strategies to reduce N leaching.
3. Reducing sector-wide N leaching by 20 percent.



Compensation team helping farmers



Last year the DairyNZ, Beef + Lamb New Zealand Compensation Assistance Team (DBCAT) was established to help farmers affected by *Mycoplasma bovis* with their compensation claims.

Hundreds of farmers across the country have been affected by *Mycoplasma bovis* (*M. bovis*). Compensation has proved to be a challenge, so a team was set up to help farmers through the process. The free DBCAT service is run independently by DairyNZ and Beef + Lamb NZ, and supported by the Ministry for Primary Industries (MPI).

DBCAT recently assisted Canterbury farmer Adrian Dawson in putting his compensation claim together. He found the team’s support, advice and accessibility invaluable.

“I know we wouldn’t have made it to this point with our claim without the DBCAT team driving it – thanks a million,” says Adrian. “My advice to other farmers going through the process is to be proactive and always be thinking a few actions ahead. There are many hoops to jump through, so educate yourself on the process and know the rules.”

In its first four months the team has grown from three to 21 team members, spread across the country, supporting 194 farmers with their claims. The DBCAT team can help farmers affected by *M. bovis* with:

- understanding whether you are eligible for compensation
- clarifying what losses you can claim for
- working through the compensation claim forms with you
- supporting you through the compensation claim process.

“None of us wants to be going through this, but it’s much easier with the great support available,” says Adrian. “Between Rural Support, DairyNZ and the DBCAT team, the welfare-checking, advice and support has been amazing. It shows the importance of finding and keeping good people to work the process through with. Red tape takes time, but if you want to be

done with it quick, you’re going to have to have to push hard, communicate frequently and dedicate all the time required – good luck.”

If you’re a farmer involved in the *M. bovis* response and would like help with compensation, email the team at dbcats@dairynz.co.nz or call them at 0800 322 281. They’ll put you in touch with a compensation assistant to help you through the process and ensure you have the answers you need.

INFO PACK ON THE WAY

Levy payers, you’ll soon be receiving an info pack on paying our share of the *M. bovis* response. Also, you’re invited to attend one of nine farmer meetings in mid-February. See page 22 of this issue for more details.

Key points



1. The DBCAT service is free and open to all farmers affected by *M. bovis*.
2. Its team members across the country assist farmers with putting together their *M. bovis* compensation claims.
3. DBCAT is run independently by DairyNZ and Beef + Lamb NZ, supported by MPI.

Pasture-rich ticks all the boxes

Farmers attending New Zealand's first Pasture Summit heard one clear message: pasture-rich milk production systems are the way to go.



Day two of the North Island Pasture Summit saw a full day of workshops held at DairyNZ's Lye Farm, Waikato.

Nearly 900 local and international delegates flocked to New Zealand's first Pasture Summit last November, held in Hamilton and Ashburton.

The joint initiative between local and Irish dairy farmers set out to motivate farmers and promote robust discussion about growing vibrant communities from pastural dairy farming.

A line-up of more than 20 international sector experts, dairy farmers and innovators shared a common message: pasture utilisation and low supplement use should be the focus for most farmers looking to build and maintain a resilient business.

Leading farmers explained that setting a stocking rate and calving date to match your pasture growth curve, and maintaining disciplined cost control, is the best way to provide a profitable business.

Participants also heard that pasture-rich milk production systems are resilient, kinder to animals and dairy staff, and environmentally sustainable. Plus, there is strong consumer demand for the products from these systems.

Research results were shared, showing cost creep occurs as supplements are progressively introduced to a grazing system. On average, every \$1 spent on supplements will end up costing \$1.50 to \$1.60 when associated costs, such as labour, infrastructure, machinery and maintenance, are included.

Farmers were also warned that capital gain can't be relied on in the future; they should focus on improving operating profit by utilising pasture and controlling operating expenses.

The next Pasture Summit will be in Ireland in 2020. If you'd like to join a group travelling to Ireland, please email info@pasturesummit.co.nz

FARMER FEEDBACK ON THE PASTURE SUMMIT



"After developing self-doubt after years of people inferring I was doing the wrong thing, it was extremely motivating and exciting to take the message back to staff that we were on the right track."

Lloyd Morgan, farm owner, Taranaki

"The consistency of messaging throughout the summit has made me take a fresh look at how I do things on-farm. Farmer presentations proved that research findings can be successfully applied in a commercial setting."

Waikato sharemilker

"A privilege to be at the Pasture Summit. Michael Murphy, Brendan Horan, Leonie Guiney and John Roche all contributed to a crystal-clear message: go the grass-rich route!"

Positive Farmers Group, Ireland

"The summit inspired me. It showed me how to become a resilient farmer and I now feel confident that there are a bunch of motivated, capable next-generation farmers ready to navigate their way to farm ownership."

Canterbury farm owner

"Great event – well organised and insightful research."

Sam Owen, sharemilker, Waikato

Meet our Lower NI Regional Team

DairyNZ's three 'Hubs' focus on the needs of dairy farmers specific to their regions: Upper North Island, Lower North Island and South Island. This month we talk to Lower NI Hub leader Rob Brazendale about his team's work and achievements.



What areas does the Lower NI Regional Team cover?

Basically, everything south of Taupō – Taranaki and Lower North Island (Stratford, Manawatu, Wairarapa, Wanganui, Horowhenua and Hawke's Bay). Our staff are mainly based at Massey in Palmerston North and in Taranaki. We know the region well, living and working here.

What roles are in your team?

There's me, 10 consulting officers (COs – one's also a regional team leader), plus two administration staff, a farm business specialist, an animal husbandry specialist, a catchment engagement leader and a DairyConnect coordinator. Other DairyNZ staff also work out of our Massey and Taranaki offices, including DairyNZ's effluent specialist (a national role).

Has your team changed its structure or priorities recently?

Under our new three-Hub regional structure, we're better-equipped to achieve broader engagement with farmers in our region, offering them a wide range of expertise and additional COs.

"In DairyNZ's most recent farmer discussion group survey, farmers rated the COs across our whole team as 'outstandingly high'."

What regional problems are you trying to solve?

In Taranaki, we're lifting the bar environmentally, proactively contacting Taranaki farmers to support them through effluent consent renewal processes. By taking a pride in the community, we're extending our working relationship with Dairy Trust Taranaki (DTT). That includes a future farm focus on social and wellbeing aspects of farming families – and on the many smaller dairy farms here facing challenges including updating ageing infrastructure.

For Lower NI, the Horizons Regional Council *One Plan* is a big focus, especially regarding nitrogen (N) leaching. Our regional plantain initiative (initially in the Tararua area, the Manawatu catchment and the Rangitikei catchment) aims to address this

and capture its learnings so all regions can benefit. We're also harnessing the region's innovative capability, linking other organisations and agencies into our strategy's six commitments. It's about making the *Dairy Tomorrow* strategy relevant and alive at a regional level.

What recent achievements are you most proud of?

In DairyNZ's most recent farmer discussion group survey, farmers rated the COs across our whole team as 'outstandingly high'. They also commented that the groups are a great place to get practical on-farm tips. One farmer said: "If I miss one I'm not happy; always good topics coming out of it". Another said: "It provides us with time away from the farm. Also, discussing every issue that's going on with farming or other people, it just clears the air and releases some stress – plus you learn lots".



Right behind DairyNZ's 'The Vision is Clear' campaign: the Lower North Island team picks up rubbish alongside the Tutira Stream behind Massey University, Palmerston North.



Get in touch with your local Hub team – check out page 25 of this edition of *Inside Dairy* or go online at dairynz.co.nz/contacts



Vigorously improving perennial ryegrass yield

DairyNZ’s latest research partnership, on ‘first-crossed’ (F1) hybrid perennial ryegrass technology, could halve the time needed to produce improved cultivars. DairyNZ’s Cameron Ludemann explains.



Cross-breeding (hybridisation) of plants and animals has made substantial contributions to agriculture, for example, in the improved performance of cross-bred cattle and hybridised maize. Recent studies indicate up to 25 percent gains

in yield could be possible in perennial ryegrass if its full ‘hybrid vigour’ potential (i.e. a plant or animal’s ability to increase its size, growth rate, fertility, production and/or yield through cross-breeding) can be unlocked.

That’s why DairyNZ is co-investing in a new F1 hybrid perennial ryegrass technology – alongside DairyBio and Agriculture Victoria (Australia), Dairy Australia, and Barenbrug Agriseeds – to replicate similar gains in ryegrass already achieved with maize.

‘Intraspecific’ hybridisation in plants requires inbred parents (i.e. from the same species) to produce sustained hybrid vigour in the F1 population. However, perennial ryegrass exhibits ‘self-incompatibility’. This limits the plant’s ability to produce inbred lines that achieve a uniform F1 population, creating a barrier to obtaining the full advantage of hybrid vigour. In current perennial ryegrass breeding programmes, hybrid vigour in the first crosses occurs between elite plants, but it’s lost as the plants are further multiplied for seed production (although the added genetic gain component is not).

Another barrier is plant breeders’ inability to harness male sterile systems in ryegrass. However, to address both issues, we can sort genetic information already present in ryegrass populations to constrict their self-incompatibility (a method that doesn’t involve any genetic modification).

Dr Colin Eady, science manager at Barenbrug Agriseeds, is optimistic about the new technology. “The F1 hybrid technology in perennial ryegrass should unlock hybrid vigour gains in herbage dry matter yield. There are some hurdles to overcome when scaling the technology from a research environment to commercial seed production. But we are working on ways to solve these.

“If we can deliver hybrid vigour in perennial ryegrass varieties through this technology, to the levels suggested by some recent studies, it would allow for a step change in production that would normally take many years of breeding.”

For instance, if successful, the time required to produce improved cultivars could be halved from the current 10 to 12 years to about six years. This is a major change in genetic gain per unit of resource and it will be of significant value to New Zealand dairy farmers once commercialised.

THE HYBRID GRASS BREEDING CONTINUUM



TYPE OF HYBRID	INTERSPECIFIC HYBRID GRASSES	INTRASPECIFIC HYBRID GRASSES
DESCRIPTION	Parents from different species are bred together to confer hybrid vigour.	Parents from the same species are bred together to confer hybrid vigour.
EXAMPLES	The ‘hybrid’ ryegrass currently in the winter feed and 12-month Forage Value Index (FVI) lists. This is a cross between <i>Lolium multiflorum</i> and <i>Lolium perenne</i> .	Hybrid maize and the F1 hybrid perennial ryegrass explained in this article.

Key points



1. Genetic analysis should overcome some of the limitations of perennial ryegrass that currently restrict its hybrid vigour potential.
2. Successfully scaling the technology from the laboratory to commercial seed production will unlock the full potential of this technology.
3. This new technology could increase dry matter ryegrass yield to levels of great value to New Zealand’s dairy sector.

Kids impress with dairy knowledge

A recent school visit to Grant and Kyly Coombes' Taupiri dairy farm left the five-time farm visit hosts feeling taken aback – and for all the right reasons.

Students from St Peter Chanel School in Hamilton (ages five to seven) used learning resources from DairyNZ's in-school education programme before visiting the Coombes' farm in North Waikato. Farm host Grant Coombes says the students confidently shared their knowledge with him during their visit.

"I was really impressed by how much work they'd done in the classroom. They even knew how many litres of milk a cow produces on average daily," he says. "They were all very inquisitive. Most of them had never been on a farm before, so it was really cool to give them an experience they might not otherwise have had."

"It's so important that we open up our businesses and tell our story to kids, mums and dads, and teachers around the country."

The children picked up a lot while on the farm, too. When they weren't learning about where milk comes from, different types of feed, and the purpose of effluent ponds, they could be found rolling down grassy hills, petting calves and playing a game to see who could whistle or moo the loudest.

"The kids were keen to get out and look around," says Grant. "I tried to give them a fun experience and inject humour where I could. It's all about getting their boots dirty and having fun."

A 'field' trip in more ways than one: for most of the St Peter Chanel School pupils, their visit to the Coombes' property was their first time on a dairy farm.



Teacher Katrina Murphy enjoyed seeing her students come out of their shells over the course of the visit.

"A lot of the students had never been close to cows or calves before, so they were a bit nervous at the start of the day," says Katrina. "By the end of it, they'd overcome their nerves and were happily letting the calves suck on their fingers."

Back in the classroom, the students created a detailed map of the Coombes' farm (pictured below), complete with cows, trees, tractors, a milking shed, milking cups, an effluent pond, and, of course, farmer Grant.

"The children came home with so much knowledge about dairy farming thanks to Grant. They were even telling the older classes about where milk comes from," says Katrina.

Grant says it's crucial for dairy farmers to be open about the awesome work they're doing, and to give urban children, parents, and teachers first-hand insight.

"It's so important that we open up our businesses and tell our story to kids, mums and dads, and teachers around the country. To be a part of their learning experience is really rewarding."



Rakaia Island owners (left to right): Dave, Margaret, Helen and Doug Turner.



Training course governs success

Dairy farm business owner Doug Turner recently took a governance course with his partners, senior management and children. We caught up with Doug to ask how the course has helped.



Doug Turner is convinced of the value of governance training. He's one of four partners in a family farming business. Headed by a general operations manager and a chief executive officer, the business operates two South Island dairy farms, one in Southbridge and the other in Oxford.

"We're getting systems and policies in place so everyone knows the business's direction," says Doug. "That's why we took Business Torque's Rural Governance Development Programme, after our chairman suggested it. It was a brilliant idea."

Doug says governance is about gaining clarity and direction for those involved in the business's management and governance.

"Trust is the biggest thing really – trusting the business will be run similar to how you want it to be. It's not easy to pull back.

"We now have the choice of when we want to take time off or time out. Before, we thought we were tied to the business."

Often seen as the domain of corporate businesses, governance can be applied to all family businesses. In many family farming situations, the family and business are intertwined, with family playing all roles from governor to manager and staff.

"You can apply this course to a whole lot of different things," says Doug. "It's not just for farming, but for other organisations and groups you're involved with in the community. It's worthwhile for any business.

"Most farmers will find governance pretty hard, but I think people shouldn't shy off the course. You don't know what you don't know. If you want to go somewhere, I think it's the thing to do."

DairyNZ uses its levy to support governance training relevant for dairy farming businesses, including partnering with Business Torque Systems Limited to promote the Rural Governance Development Programme.

You can also find out about governance at dairynz.co.nz/governance

Governance or management?

Governance is the role of leading a business or organisation and providing direction to management.

It's the job of the governing body (a committee or board) to provide future direction, leadership, control, and accountability.



Rural Governance Development Programme 2019

This five-day programme of workshops spread over 10 months delivers learning tailored to the unique needs of each board. Ideal for decision-makers in large and small- to medium-sized dairy farming businesses.

	Christchurch	Taupo
Days 1 and 2	30 April to 1 May	23 to 24 April
Day 3	25 June	18 June
Day 4	October or November to suit participants	
Day 5	February 2020	February 2020

Business Torque workshops are facilitated by Peter Allen, course co-creator and industry leader in the application of governance practices. Visit businessstorque.co.nz



Pasture profit adds up

Are you growing and utilising as much home-grown feed as high-performing farmers in your area? Find out using DairyNZ's new online tools.

DairyNZ has launched two new levy-funded online resources: the Pasture and Crop Eaten Calculator and the Pasture Potential Tool (dairynz.co.nz/pasture-gap). These resources will help you calculate pasture and crop eaten and assess how you compare to neighbouring farmers in terms of growing and utilising home-grown feed (pasture and crop). Determining your performance gap is a starting point for assessing whether you can make more money from pasture.

Do you know your pasture eaten figure?

Pasture eaten is a key performance indicator for successful dairy farm businesses. It's a measure of how much pasture and crop grown on the milking platform is being eaten by cows. This is measured in tonnes of dry matter per hectare (t DM/ha).

The Pasture and Crop Eaten Calculator calculates your pasture eaten figure based on the energy it takes to drive your farm (e.g. cow maintenance and milk production) and deducts any feed brought onto the milking platform or any feed consumed by cows grazed off. The remaining feed is the quantity of pasture and crop eaten.

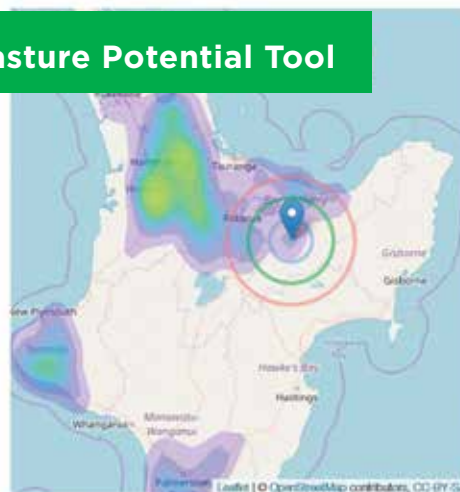
Knowing your current pasture eaten figure allows you to assess your current farm performance against its potential.

What is your pasture potential?

The online Pasture Potential Tool allows you to create a regionally relevant 'benchmark' for your farm and compare your own pasture eaten with other similar farms (e.g. soil type, elevation, nitrogen use) in your area.

The tool provides a graph of the distribution of pasture and crop eaten within a 20 kilometre (km), 40km and 60km radius from the chosen location, using DairyBase data. It defines your pasture potential as the level that only one out of ten farmers beat. The 'gap' is the difference between your current figure and the top-performing result.

Pasture Potential Tool



Production season?

2016-17 (58 Farms)

Altitude over sea level?

Low (0-50m) (32 Farms)
Middle (50-200m) (10 Farms)
High (200m+) (16 Farms)

Soil orders?

Allophanic (1 Farms)
Pumice (22 Farms)
Organic (1 Farms)
Recent (2 Farms)

Nitrogen fertiliser applied?

100 kgN/ha/y

Figure 1. Pasture Potential Tool: selection of location and important characteristics.

DairyNZ's Pasture Potential Tool enables farmers to identify the gap between their farm's potential for and its actual pasture and crop eaten.

What is it worth?

Pasture eaten can help you generate additional profit with very little extra effort. DairyBase data suggests increasing the amount of pasture and crop eaten on-farm can equate to around \$300 of extra operating profit per hectare of DM eaten. Here's an example :

Pasture potential - Pasture and crop eaten = gap x 300 = Potential profit

e.g. 15.5 tonnes - 13.5 tonnes = 2 tonnes x \$300 = \$600/ha

How will you achieve your pasture potential?

There are two areas of opportunity: growing more and utilising more of what you're growing.

Grazing management and stocking rate are key here. The critical factors to focus on at every grazing are:

- grazing at the correct time and pre-grazing yield
- grazing to the correct residual (adequate pasture allocation).

To find out more about how you can grow and utilise more pasture, visit dairynz.co.nz/pasture-management and check out the Pasture Potential Tool, Pasture and Crop Eaten Calculator and other resources at dairynz.co.nz/pasture-gap

Forum inspires Dairy Environment Leaders

Nearly 100 of New Zealand's most passionate dairy farming leaders gathered late last year for a three-day forum devoted to sustainable farming.

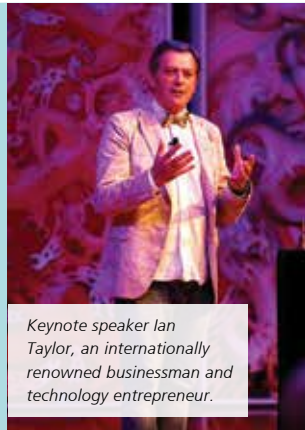
Meeting in Wellington for DairyNZ's annual Dairy Environment Leaders

Forum, the farmers discussed what the dairy sector is doing to meet environmental commitments and how science can help.

Dairy Environment Leaders programme chair Tracy Brown says the forum is about empowering dairy farming leaders to shape a sustainable future for the sector and its communities.

"Farmers are doing a lot of good work on their farms and in their communities to build great environments and establish sustainable businesses for the long-term – and the forum is a key part of continuing that journey."

Check out videos from this year's forum at dairynz.co.nz/delf



Keynote speaker Ian Taylor, an internationally renowned businessman and technology entrepreneur.

Who'll be the next Dairy Woman of the Year?

Time is running out to submit your nomination for the Fonterra Dairy Woman of the Year 2019.

If you know a woman who's contributed significantly to the dairy sector with passion, drive, innovation and leadership, you have until March 1 to nominate her.

The winner will be announced at the Dairy Women's Network national conference in Christchurch on May 1, 2019. She will receive a bursary of up to \$20,000 for an approved development programme, professional/business coaching and/or learning experience chosen by the recipient.

Find out more and make your nomination – dwn.co.nz/dwoty



Paying our share of the M. bovis response

Levy payers, look out for your information pack on paying our sector's share of the *Mycoplasma bovis* (*M. bovis*) response. Your pack will arrive by mail at the end of January or early February – and please have your say.

Also, you're invited to attend one of nine farmer meetings in mid-February to hear the latest on the *M. bovis* response, find out how the biosecurity response levy will work and have your questions answered. Visit dairynz.co.nz/GIA for dates and venues.



As part of our movement to encourage all Kiwis to do their bit to look after waterways, we're launching a radio campaign on *The Hits*, called 'What's your clear favourite?'

We want to celebrate New Zealand's best swimming spots and are asking Kiwis to upload photos of their favourite river, lake or beach with a message explaining why they love it. People can then vote on their favourite swimming spot, before culminating in a grand prize.

Go to thehits.co.nz to nominate your favourite swimming spot now.



New consulting officer driven by love for farming and footie

After a stint in the northern hemisphere, DairyNZ's new consulting officer Nathan Clough is excited to be back on home turf pursuing his two greatest passions.

Nathan returned last year from Aberdeen, Scotland, where he played semi-professional rugby for two years while also working on a nearby dairy farm. He's brought that experience back to Taranaki, starting as a consulting officer (CO) last November and ready to make his mark for local rugby side Stratford this season.

Nathan is looking forward to working alongside local farmers and helping them to keep abreast of new research, dairy sector developments and information, as well as facilitating the sharing of knowledge and experience.

"With so many variables in Taranaki, every farm is unique. I'm excited about seeing the different systems and how they operate and ensuring farmers have the best support and as much access to good information as possible," says Nathan.

Agriculture and rugby have influenced most of Nathan's decisions over the years, including his move to Lincoln University (where he played rugby with the likes of Scott and Jordie Barrett and Jack Goodhue) after graduating from Francis Douglas High School in New Plymouth.

"I was really passionate about agriculture so decided to head to Lincoln University to further develop that. The rugby set-up also looked really good down there."

Nathan got a taste of farming at an early age, growing up on his parent's 220-cow dairy farm in Stratford.

"I helped mum and dad out on the farm as soon as I could walk. That led to relief milking for the neighbours and other people in the region at weekends while I was at Francis Douglas.

"I initially wanted to be a fert rep and focused on soil science at university but was unsure what I wanted to do at the end of

uni. Then the opportunity came up to play rugby overseas, which I took, and now I'm here in Taranaki."

Although Nathan and his partner Bianca loved their time in Scotland, they're happy to be home.

"We're really lucky with the environment in New Zealand and the cultural and social side as well – everyone knows everyone and you don't feel like a small fish in a big pond," he says.

Nathan is one of four COs in Taranaki and will cover the south of the region. Find his contact details on page 25.

Skills Days

DairyNZ's Taranaki team is hosting a series of Skills Days this month, on February 20, 21, 26 and 27. The events are a one-stop-shop for gaining the skills needed for late summer and autumn, including:

- steering your business into the future with an excellent strategy
- preventing and managing mastitis and lameness
- reducing milking times
- accurate body condition scoring.

The short, practical sessions will include plenty of examples and discussion. They're suitable for everyone, from those new to the sector to more experienced farmers looking for a refresh.

Full details at dairynz.co.nz/events



Nathan in action for Lincoln, with Scott Barrett (current All Black) ready for the offload.

February events

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
				1	2	3
4	CANTERBURY/NORTH OTAGO Amberley Biz Start: these sessions will help you build business skills for management positions or running your own business.		7	TARANAKI Cardiff discussion group: identify opportunities, solutions and seasonal issues in the region. Held at Brian and Kyla Hamilton's Opunake farm.		10
11	12	13 & 14 SOUTHLAND/SOUTH OTAGO Pasture Plus discussion group: for those wanting to grow their pasture, supplement and winter feeding knowledge. At John Van Vliet's Lumsden farm on the 13th and Southern Dairy Hub on the 14th.	14	15	16	17
18	19		21	LOWER NORTH ISLAND Foxton/Moutoa discussion group: chat about the host's farm system and management practices, plus seasonal issues affecting farmers in the region.		24
25	26		28			

FOR A FULL LIST OF WHAT'S HAPPENING THIS MONTH, VISIT DAIRYNZ.CO.NZ/EVENTS

NORTHLAND

Two new consulting officers have joined DairyNZ's Northland team. Ryan Baxter has replaced Graeme Peter in the Whangarei West area, while Lori Grinter has replaced Mark Forsyth in Lower Northland.

Ryan brings strong analytical skills and a technical dairy farming background to the role. He's returned to his home region after working in the Central Plateau area and travelling overseas.

Lori is completing her Master of Science, specialising in dairy systems management with a focus on heat stress management (highly relevant to Northland). Lori worked for DairyNZ as a research technician in 2016.

You can find Ryan and Lori's contact details on page 25, and at dairynz.co.nz/co

WAIKATO

DairyNZ is pleased to welcome Lizzy Moore as our new consulting officer (CO) for the Hauraki/Coromandel region. Lizzy has grown up on a dairy farm and now, with her partner Ben, owns and leases a farm in Tirau. Alongside practical experience, Lizzy brings technical and sector expertise thanks to 10 years with Primary ITO, including tutoring.

Contact details for Lizzy and our other Waikato COs are on page 25, and at dairynz.co.nz/co

BAY OF PLENTY

What are DairyNZ's priorities for the Bay of Plenty? Our new regional plans identify the current and future priorities for each region. They also detail the latest DairyNZ and sector activity, including research, development, communications and policy work. Take a look at what's happening to support dairying's economy, environment, people and cows in your region at dairynz.co.nz/p4r

DairyNZ consulting officers

Upper North Island – Head: Sharon Morrell 027 492 2907

Northland

Regional Leader	Tareen Ellis	027 499 9021
Far North	Denise Knop	027 807 9686
Lower Northland	Lori Grinter	021 242 5719
Whangarei West	Ryan Baxter	021 809 569

Waikato

Regional Leader	Wade Bell	027 285 9273
South Auckland	Mike Bramley	027 486 4344
Hamilton North	Jaimee Morgan	021 245 8055
Matamata/Kereone	Frank Portegys	027 807 9685
Morrinsville/Te Aroha/Waihi	Euan Lock	027 293 4401
Hauraki Plains/Coromandel/Paeroa	Lizzy Moore	021 242 2127
Te Awamutu	Stephen Canton	027 475 0918
Otorohanga	Michael Booth	027 513 7201
South Waikato	Kirsty Dickins	027 483 2205

Bay of Plenty

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

Lower North Island – Head: Rob Brazendale 021 683 139

Taranaki

Regional Leader	Sarah Dirks	027 513 7202
South Taranaki	Nathan Clough	021 246 5663
Central Taranaki	Sarah Dirks	027 513 7202
Coastal Taranaki	Anna Arends	021 276 5832
North Taranaki	Lauren McEldowney	027 593 4122

Lower North Island

Horowhenua/Coastal and Southern Manawatu	Kate Stewart	027 702 3760
Wairarapa/Tararua	Abby Scott	021 244 3428
Hawke's Bay	Gray Beagley	021 286 4346
Northern Manawatu/Wanganui/Woodville	Jo Back	021 222 9023
Central Manawatu/Rangitikei	Richard Greaves	027 244 8016

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	Tony Finch	027 706 6183
North Canterbury	Amy Chamberlain	027 243 0943
Central Canterbury	Natalia Benquet	021 287 7059
Mid Canterbury	Stuart Moorhouse	027 513 7200
South Canterbury	Heather Donaldson	027 593 4124
North Otago	Anna Hall	021 712 513

Southland/South Otago

Regional Leader	Richard Kyte	021 246 3166
South/West Otago	Mark Olsen-Vetland	021 615 051
Central and Northern Southland	Nicole E Hammond	021 240 8529
Eastern Southland	Nathan Nelson	021 225 6931
Western Southland	Leo Pekar	027 211 1389

LOWER NORTH ISLAND

Discussion groups are back in full swing this month at six locations around the region. Start your year on the front foot by joining us on-farm as we discuss each host's farm system and management practices to identify opportunities and solutions. We'll also be discussing seasonal issues and challenges that are affecting farmers in our region.

Find a discussion group near you at dairynz.co.nz/events

TOP OF SOUTH ISLAND/WEST COAST

Looking for inspiration to set up another income stream for your farm business? Need help progressing family members into the farming business? 'Making more from your small farm', an event from SMASH (Smaller Milk and Supply Herds), is coming to the West Coast on February 13. Guest speakers include DairyNZ's Paul Bird, Coach Approach Rural's John Redpath and dairy farmer/entrepreneur Graham Smith. Visit smallerherds.co.nz/event-list for more details.

CANTERBURY/NORTH OTAGO

Amy Chamberlain is DairyNZ's new consulting officer (CO) for North Canterbury. She knows the area well, having grown up on a sheep and beef farm in Cheviot, and she also has on-farm dairying experience.

Anna Hall has also joined DairyNZ, as a fixed-term CO in the North Otago area. She's standing in for Trevor Gee, who's busy working on the *Mycoplasma bovis* response. Anna is currently sharemilking and has previously worked for PrimaryITO.

Amy and Anna are looking forward to getting out and about in their respective areas. You can find their contact details to the right and at dairynz.co.nz/co



SOUTHLAND/SOUTH OTAGO

Now's the time to think about setting up your winter crop. Getting onto this early will reduce the amount of time and effort needed once the crop is being grazed. There are some simple things you can do now that will have a large impact on the success of your wintering. Read more at dairynz.co.nz/crops



MARK & MEASURE

2019 courses

Clarity and direction for business and personal success

take time out to focus on and plan your future



acquire tools to evaluate business and investment decisions

understand your business's potential with experts on hand



meet like-minded farmers



New Zealand
Permit No. 174646



Register by
March 31

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

Taupo, May 21-23

Queenstown, June 11-13

dairynz.co.nz/markandmeasure

