2023/2024

Fonterra™

Dairy for life

WELCOME TO YOUR

Farm Insights Report

Ludf

SUPPLY NUMBER: 37581

Where your milk went last season

Your milk helps to feed people all around the world – thanks for all your hard work to make this happen.

Milk processed at Canterbury sites was used by customers to make products like:

Supplements, pizza, pasta, bakery items, dairy desserts

And the quality of your milk was key – you achieved:

169 Excellence Days

Great work, you're in the top 20% of farms for:

6-week in-calf rate

How to use this report

Using information to guide decisions is nothing new to farmers. For years you've used grass growth, herd condition and so much more to guide your choices on-farm. This information alone is useful, but it becomes a powerful decision-making tool when comparing your farm to similar farms, and trends over time.

That's what this Farm Insights Report is for. It gives you a view of your farm's performance in context – so you can identify what could help you get more out of the work you're putting in, now and into the future.

Spot an issue with your data?

We've used your Farm Dairy Records and other data we hold for you.
Please check your farm's information for accuracy and note the limitations of this report, both on page 12.
You can adjust the data we have by resubmitting your Farm Dairy Records at **nzfarmsource.co.nz/farmdairyrecords**

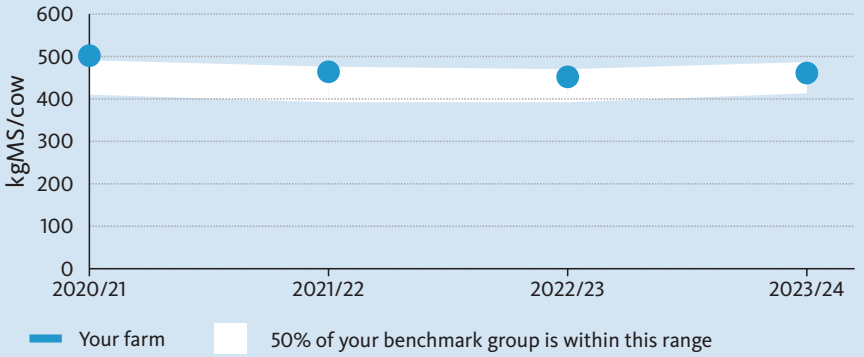
Your farm's big picture view

Success looks different to everyone. By looking at key trends over time, you can start to build a bigger picture of sustainability on your farm.

Production per cow

Your farm is benchmarked against other Canterbury System 4 farms.

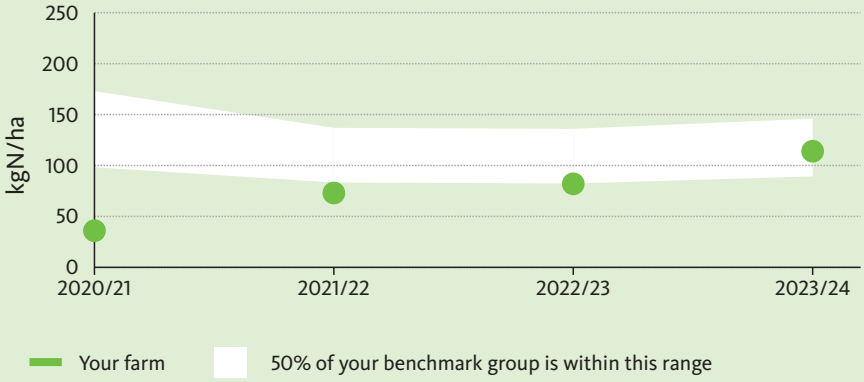
Higher production per cow with the same inputs, like feed, can mean emissions produced are spread across extra milk solids. That's good for lowering emissions intensity.



Purchased Nitrogen Surplus

Your farm is benchmarked against farms in the Canterbury region with milk production between 1401-1700 kgMS/ha.

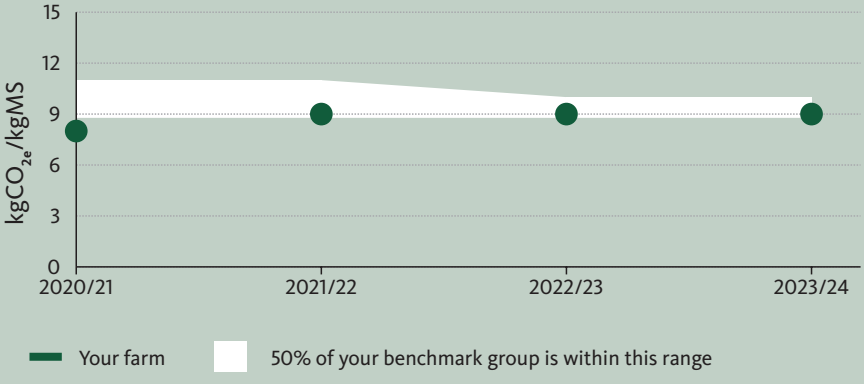
Surplus Nitrogen in your system is at risk of being lost to the environment. See more on page 10.



Greenhouse Gas Emissions per kgMS

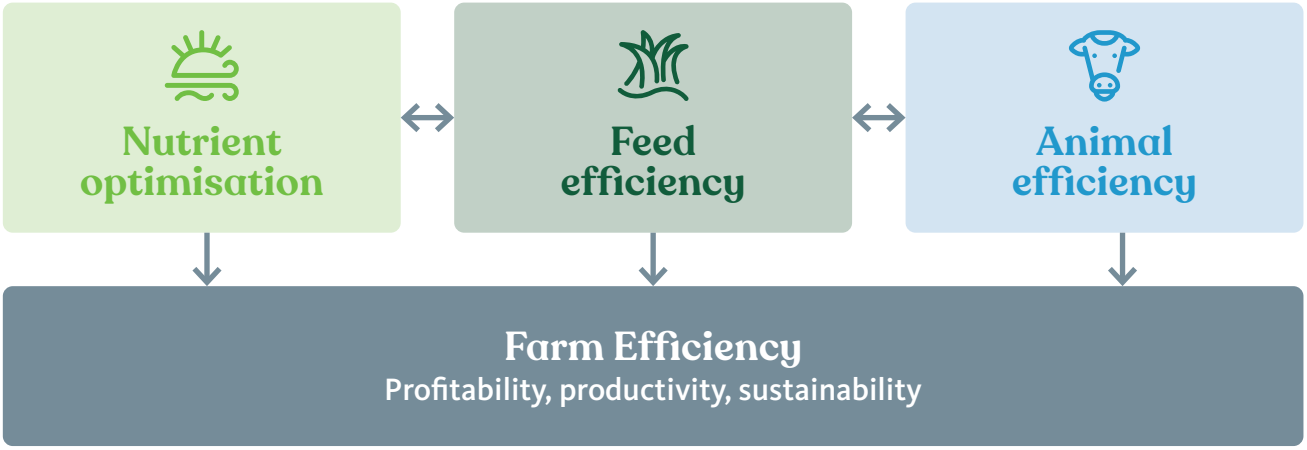
Your farm is benchmarked against others in the Canterbury region.

You can find a more detailed breakdown of your emissions on page 9.



The farm efficiency opportunity

Operating an efficient farm is about getting the most out of everything you're putting into your system.



What are the options for your farm?

Every farm is different, depending on your system, goals, and unique way of farming. Based on your insights, here's a snapshot of how your farm compares to others.

	Further info (pg)	Benchmark group average	Your farm 23/24 season	High opportunity ›››››››› High performer
Nitrogen fertiliser efficiency (kgDM/kgN)	5	92	82	
Homegrown feed (tDM/ha)	5,6	14.4	15.0	
Feed converted to milk (%)	6	56	56	
Production per kg liveweight (%)	6	96	100	
6-week in-calf rate (%)	7	70	75	
Not in-calf rate (%)	7	14	7	
Somatic cell count (cells/ml)	8	139,532	134,832	
Mastitis (%)	8	12	20	
Lameness (%)	8	6	8	

** the benchmark group for Homegrown feed is the same as that used on page 5 of the report*

Nutrient optimisation

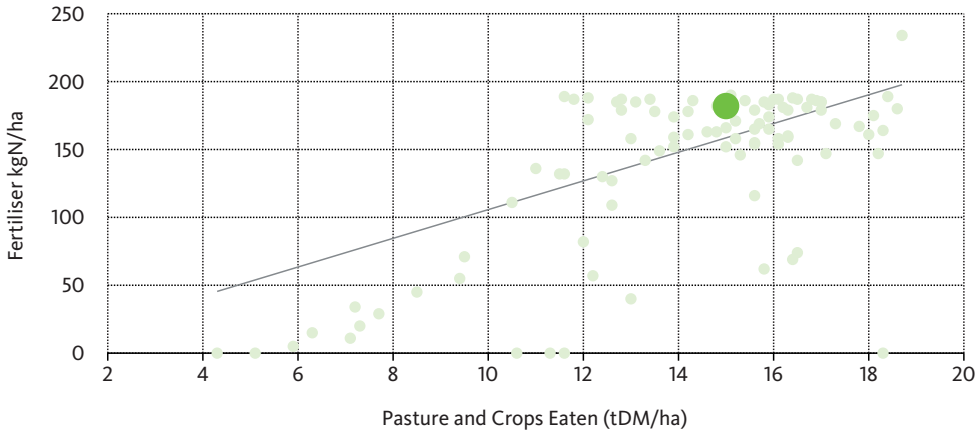
Are you getting the best growth response to the fertiliser you're using? Optimised use can save costs, and reduce loss and wastage.

Your farm's nitrogen fertiliser conversion efficiency

This data shows how efficiently the nitrogen you're applying is converted into feed.

How does your farm compare?

- Your farm (actual)
- Closest 100 farms to your location (radius 15km)
- Local average



Your farm's N-fertiliser efficiency

Your farm is eating
15.0
tDM/ha

Your farm is applying
182
kgN/ha

Your nitrogen fertiliser efficiency is
82
kgDM/kgN

Efficiency opportunity

The top 20% of farms in your region are achieving fertiliser efficiency of
116.0
kgDM/kgN

If you could increase your efficiency by 10%, you could harvest
16.5
tDM/ha

Opportunity: If you grew more feed from the same nitrogen fertiliser

By lifting homegrown feed by 0.5tDM/ha you could achieve the following::

↑ **18** kgMS/cow

↓ **2.2%** $kgCO_2e$/kgMS

↑ **$78,138**

What's the next step?

- Consider factors like fertiliser management, effluent, pasture, cropping, soil and irrigation.
- Scan this QR code for DairyNZ's nitrogen resources to learn more.
- Consult your Sustainable Dairying Advisor, or a farm advisor, for personalised advice.

Feed efficiency

How are you maximising yield and quality of homegrown feed, and using supplementary feed? With the right balance you can manage costs and ensure feed is converted efficiently into milk.

Your feed sources

Your farm's feed sources (tDM/ha)

Your region's feed sources (tDM/ha)

Benchmark group is farms with similar milk production by hectare in your region.

Feed sources	Your farm	Your region
Pasture and crops (grown on farm)	15.0 (77%)	15.4 (80%)
Pasture and crops (imported to farm)	2.4 (12%)	1.0 (5%)
Grazing off (incl. wintering)	2.2 (11%)	1.5 (8%)
All other feeds	0.0 (0%)	1.4 (7%)

How much of your feed eaten is converted into milk?

Benchmark group is farm system by region. Your farm's average herd liveweight is assumed as 460kg based on your breed mix.

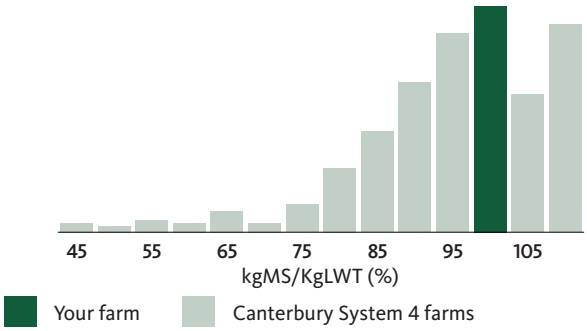
From your records, we estimate that the proportion of feed eaten and converted into milk on your farm is:

56%

Benchmark average
56%

Benchmark top 20%
59%

Your farm's milk production per kilogram of liveweight



Opportunity: If more of the feed eaten on your farm was converted to milk

Based on a 1% increase in the proportion of feed converted to milk, you could achieve:

↑ 7 kgMS/cow

↓ 1% $kgCO_2e/kgMS$

↑ $33,098

What's the next step?

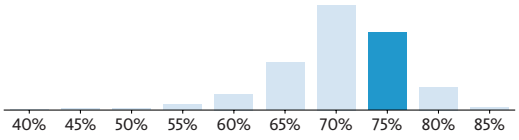
- Consider factors like cow health and quality (page 7 and 8 of this report), or feed type and quality.
- Scan this QR code for DairyNZ's feed utilisation resources.
- Consult your Technical Sales Rep, farm consultant, or nutritionist for personalised advice.

Animal efficiency

Reproductive performance is key in a seasonal calving system. Cows that cycle earlier will have more opportunities to conceive, and more days in milk the following season.

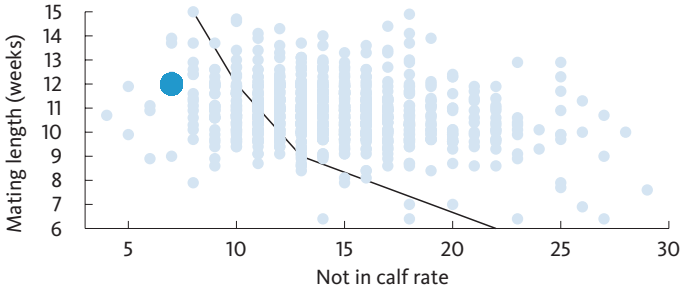
Reproductive performance

Your 6-week in-calf rate: 75%



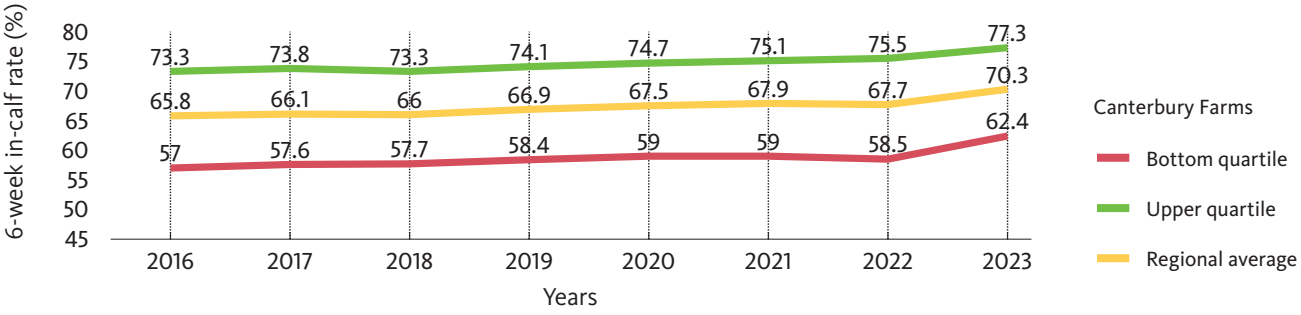
Your farm Fonterra farms in Canterbury region

Your not in-calf rate, and mating length



Your farm Fonterra farms in the Canterbury region Expected not in-calf rate

Reproductive performance over time



If your in-calf rate reached 78%

For a herd your size with your 6-week in-calf rate, reaching the industry goal of 78% could mean the following:

- ↑ 2 kgMS/cow
- ↓ 0.3% kgCO2/kgMS
- ↑ $10,482

What's the next step?

- Consider early/dated pregnancy testing which is needed to properly assess your farm's reproductive performance.
- Scan this QR code for DairyNZ's InCalf resource.
- Consult your breeding company or vet for personalised advice.

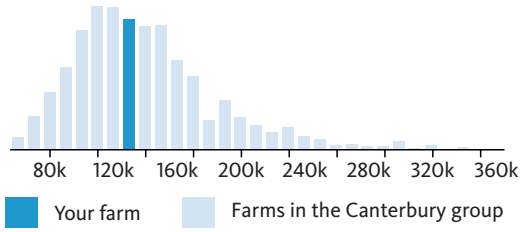
Animal efficiency

Your herd's health and condition are key to the overall efficiency picture on your farm. Factors like infection and lameness can cost time, money and cow productivity.

Somatic cell count

Bulk somatic cell counts (SCC) over 100,000 cells/ml indicate some cases of sub-clinical infection are present in the herd. Animal energy is then diverted from milk production to fight off the infection – research has shown there's a 2.1% loss in production for every doubling of somatic cell count over 100,000 cells/ml.

Your farm's annual average somatic cell count 2023/2024



Opportunity: If you reach 100,000 cells per ml

↑ 4 kgMS/cow

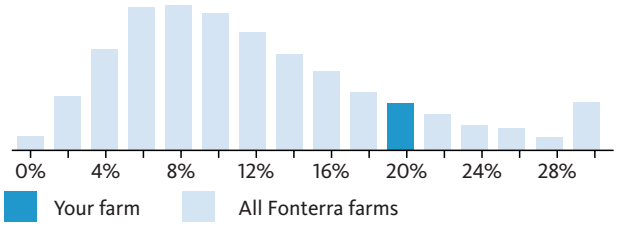
↓ 0.5% $kgCO_2e$/kgMS

↑ $18,500

Mastitis & lameness

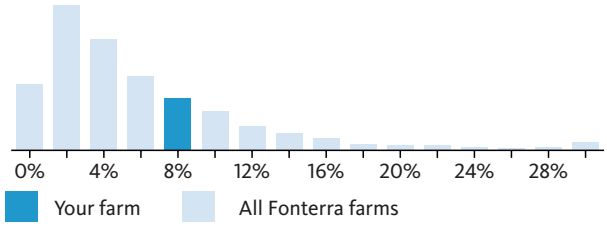
Mastitis and lameness are both painful for affected cows, and can impact production and performance.

Your farm's mastitis cases as % of peak cows 2023/2024



Estimated cost of mastitis for your farm ($150/case)
$17,400

Your farm's lameness cases as % of peak cows 2023/2024



Estimated cost of lameness for your farm ($250/case)
$11,750

What's the next step?

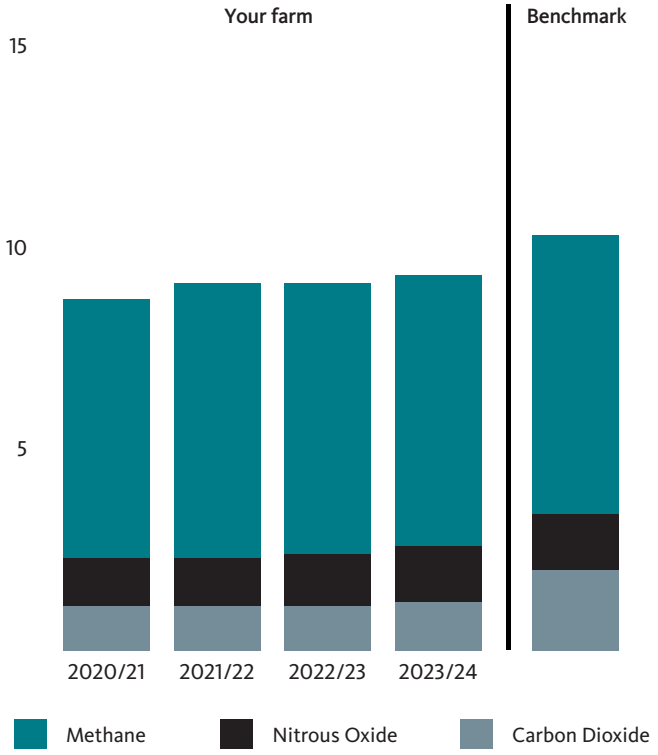
- Consider working with a vet to investigate lameness or mastitis issues.
- Refer to the SmartSAMM guidelines on the DairyNZ website for more information on managing mastitis.
- Scan this QR code to book a Fonterra Milk Quality Improvement visit for advice.

Emissions

Even the smallest on-farm efficiency gains can boost profitability and productivity. But they're also good for reducing emissions per kgMS. Each farm has a unique opportunity - it's up to you and your focus.

Your on-farm emissions

Your farm is benchmarked against Canterbury farms



This data shows the emissions that are created from your farming activities. There are also other things that influence your farm's footprint - things like peat soil, land-use change and carbon removals. These aren't captured in the data below.

	Your Farm	Benchmark
Emissions ($kgCO_2e$)/ kgMs	**9.3**	**10.30**
Methane (biological)		
Dairy herd	5.40	5.50
Replacements	0.80	0.90
Effluent	0.50	0.50
Nitrous Oxide (biological)		
Livestock	0.90	0.90
Fertiliser	0.40	0.40
Manure and soil	0.10	0.10
Carbon Dioxide (non-biological)		
Imported feed	0.10	0.80
Fertiliser	0.40	0.40
Other	0.70	0.80

Where can I find more information?

Methane

- Animals, pages 7-8 of this report
- Emissions booklet, pages 20-26

Nitrous Oxide

- Nutrients, page 5 of this report
- Emissions booklet, pages 27-34

Carbon Dioxide

- Nutrients, page 5 of this report
- Feed, page 6 of this report
- Emissions booklet, pages 35-40

We've shifted to a more accurate GHG model

Your emissions are now calculated using a model from AgResearch called the Agricultural Lifecycle Assessment (Ag:LCA). This is based on more detailed information about your farm from your Farm Dairy Records. You can find out more about this switch by scanning this QR code:

What's the next step?

- Scan this QR code for the emissions booklet to read more.
- Consider exploring the reading outlined under each gas type to understand where there are opportunities for your farm.
- Consult your Sustainable Dairying Advisor for more personalised advice.

Water quality

Potential water quality risks are well-known by the dairy farming community in New Zealand. Farmers have taken several actions from fencing off waterways to carrying out riparian planting to help manage water quality.

Your farm's Nitrogen Risk Scorecard

This data summarises risks for nitrogen loss on your farm. Your farm's full Nitrogen Risk Scorecard can be found online using the QR code here:

Stock Management	VERY HIGH	Cropping & Cultivation	VERY LOW
Nitrogen Fertiliser	VERY LOW	Effluent Management	VERY LOW
Imported Feed	VERY LOW	Irrigation	LOW

Purchased Nitrogen Surplus

23/24 season

Nitrogen Fertiliser		Imported Feed		Exported Product		Purchased Nitrogen Surplus
182 kgN/ha	+	46 kgN/ha	−	114 kgN/ha	=	114 kgN/ha

Refer to page 3 for your PNS trend over time.

What's the next step?

A Fonterra **Farm Environment Plan** is tailored to the risks and practices on your farm. You can review or complete actions in your Digital Dairy Diary or contact your Sustainable Dairying Advisor for more support.

Biosecurity

New Zealand is naturally free of many pests and diseases that exist in other parts of the world. But that means new and invasive species could threaten our unique biodiversity - just take mycoplasma bovis and fall armyworm for example.

Good disease management on-farm is essential for protecting your herd. Flow-on benefits can include reduced treatment inputs, maximised genetic investment, better milk production and lower feed inputs.

Biosecurity measures that protect against Bovine ViaralDiarrhea (BVD) can also protect your herd against other harmful diseases.

BVD management opportunity

The estimated cost of BVD in a negative herd: $22.22 x peak cow numbers/year.

The cost of BVD in a positive herd is much higher with negative impacts on conception as well as reduced production.

$12,621

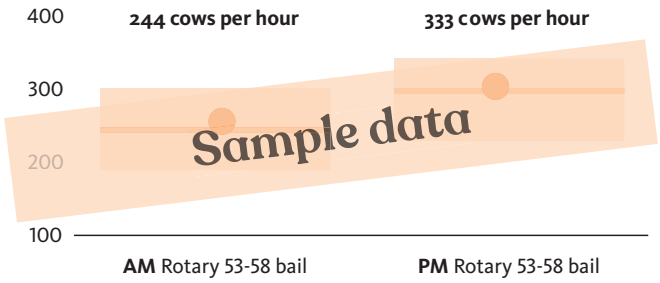
What's the next step?

Consult your local vet about disease management, include BVD in your Animal Wellbeing Plan, and scan this QR code to read more about biosecurity on our website.

Milking efficiency

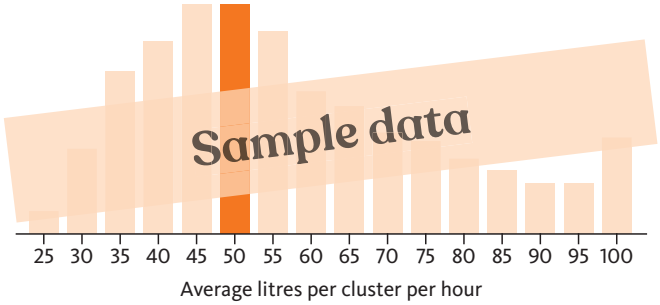
Saving time in the shed can be a great way to free up time to focus on other important farm priorities. These insights use milk vat monitoring data and DairyNZ's research to estimate the time that could be saved on your farm at milking time.

Average cows per hour



Your farm — Your benchmark's average — 50% of your benchmark group are within this range

Litres per cluster per hour



Your farm — All Fonterra farms

We estimate you could save

7–16 hours per week

Sample data

This estimate is based on your farm reaching 80-100% of its potential milking efficiency using the maximum milking time (MaxT) strategy.

What's the next step?

Fonterra offers milking efficiency support as part of the Milk Quality Improvement Visits. Scan this QR code for more information.

Your farm's key information

	Units	21/22	22/23	23/24
Dairy farm effective area	Ha	160	160	160
Peak cows (maximum numbers)	Cows	558	547	568
Stocking rate (dairy cows)	Cows/ha	3.5	3.4	3.6
Production	kgMS	258,851	247,291	261,894
Production per ha	kgMS/ha	1,618	1,546	1,637
Average somatic cell count	Cells/ml	142,485	140,252	134,832
Nitrogen fertiliser applied per ha	kgN/ha	144	158	182
Nitrogen fertiliser conversion efficiency	kgDM/kgN	109	95	82
Pasture & crop eaten (homegrown feed)	tDM/ha	15.7	15.0	15.0
Feed converted to milk	%	57	57	56
Production per kg liveweight	%	100	98	100
Imported feed fed	tDM	418	321	455
Imported supplement per cow	tDM/cow	0.7	0.6	0.8
Production per cow	kgMS/cow	464	452	461
Purchased Nitrogen Surplus	KgN/ha	73	82	114
Greenhouse Gas Emissions per kgMS	$kgCO_2e$/kgMS	9.1	9.1	9.3
Mastitis cases	Cows	88	57	116
Lameness cases	Cows	147	65	47
6-week in-calf rate	%	-	-	75
Not in-calf rate	%	-	-	7
Mating length	Weeks	-	-	12
Total biological methane	kg/ha	430	416	436
Total biological nitrous oxide	kg/ha	7	7	8

What is your total biological kg emissions

This number shows an estimate of your farm's biological GHG emission for your dairy farm effective area. This is an indication of the emissions which may be included in any future emission pricing regulations.

Spot an issue?

If your numbers don't seem quite right, you can resubmit your data anytime at nzfarmsource.co.nz/farmdairyrecords

The information and insights provided to you in this report are sourced from information that you have provided through your Farm Dairy Records, together with milk quality and production data that we hold and third party industry research. While the information and insights provided may identify risks and opportunities, such information is general information only and is not in the nature of advice. Any modeled financial costs or savings are estimated projections only, and provided in New Zealand dollars based on values current at the time this report was prepared ($7.80/kgMS). We make no representations or warranties (whether express or implied) as to whether information or data provided in this report is accurate, reliable or complete. You are solely responsible for your own assessment and evaluation of the information and for the actions or decisions you take in reliance on the information or data generated. Accordingly, Fonterra shall not be liable for any loss arising from any actions or decisions taken by you in reliance on the information contained in this report.