



Dairy for life

Milk Vat Monitoring Systems

2021



The
Co-operative
Difference

Your latest Milk Vat Monitoring updates

The Co-operative Difference makes Good Together real on farm. It means pulling the best of what we do into five focus areas and making sure they become the strongest possible foundations for our Co-op, not just for today, but well into the future. One of the five focus areas is 'Milk'.

Our milk is some of the finest in the world, and that's because of our exacting standards, rigorous testing and robust auditing processes. That's how we meet the needs of our regulators, our markets, and most importantly – our customers and consumers.

Achieving Milk Quality Excellence is a standard we all aspire to. Managing milk quality through proactive use of Milk Vat Monitoring Systems (MVMS) is a way we demonstrate good practice in action by advancing our Co-op's milk collection efficiency. Whether you are in the farm dairy or out in the paddock, you can monitor your vat's volume, agitation and temperature from the palm of your hand.

We are continuously improving our tools and technology to support you on farm, this booklet provides you with the latest updates to MVMS.

Together we make the difference.

MVMS Questions

Please contact your MVMS vendor directly if you have experienced the following:

- Calibration faults – Temperature/Volume not reading correctly
- Damage to the system
- Changes to MVMS alerts and messaging
- Updates of on farm information (staff changes etc.)

For all other queries please contact the Farm Source Service Centre: **0800 65 65 68.**

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Milking Time Windows (MTW)

The purpose of MTW is to help facilitate Fonterra collecting all your milk first time and so that you don't have a tanker arrive while you are still milking.

If your tanker is scheduled during your milking time, continue to milk as normal. Tankers will collect all available milk, and an additional collection will be scheduled as soon as possible.

MVMS will provide more precise milking times and volumes.

This means:

- You'll no longer have to manually update MTW as your production changes throughout the season
- MVMS will enable Fonterra to calculate a MTW average based on 15 days of milking, to which a buffer will be added
- Your tanker ETA and MTW will be available via the On-Farm App.

Please continue to go to the Farm Source Website or call the Service Centre to let us know about any significant cycle changes or special non-collection days. For example, changing from once a day milking to twice a day milking.

Milk Quality Testing Changes – September 2021

To ensure your Co-op has the best quality milk we are introducing the Milk Quality Indicator (MQI) to support testing from September 2021.

The MQI is an estimate of the bacterial level in the vat based on the milking time and temperature data.

You will find the MQI on your system provider's App, the Farm Source website. The MQI will help you spot and address any issues with your system that may be impacting the quality of your milk. The early warning alerts you can sign up for with your MVMS vendor and the MQI will help drive our milk quality testing, please note, results until September 2021 will be advisory only.

We use the MQI algorithm to calculate the Indicator Level using the volume, agitation, CIP status and temperature profile. This Indicator Level is based on an estimate of the bacterial level, not the actual level. Actual bacterial levels are only determined by Bactoscan tests performed at Milktest NZ.

Other important MQI Information

- The MQI algorithm has been developed using current NZ milk data, so while it's only an estimate, it is using bacteria growth data in NZ milk. The algorithm is under constant review and refinement to better assess the milks bacterial risk.
- We are making refinements to the MQI algorithm to better accommodate on-farm practices and address any anomalies that may arise. We'll use this information to support our discussions with you, to improve your MVMS and milk quality where necessary.

Milk Quality Indicator

Milk Quality Indicator	Actions	Alert sent to Fonterra to testing milk collection sample
These Milk Cooling alerts appears on your provider's app	What to look out for on farm if you get these alerts	After September 2021
NO MILK COOLING RISK	No milk cooling risk detected.	
LOW	<ul style="list-style-type: none"> • Check the temperature of your milk entering the vat. If elevated check your primary cooling is working correctly. • Check your refrigeration unit is working correctly – refer Milk Cooling Factsheet. • Agitators are required to ensure your milk is cooled efficiently and does not separate in the vat. • Not meeting the agitator will typically enact an Mbacto test. • Higher risk milk is likely to receive a downgrade and incur demerits (post Sept 2021) if sent to Fonterra. 	
MEDIUM		Bactoscan Test (downgrades incurred apply)
HIGH		Bactoscan Test (downgrades incurred apply) A titratable acidity test before tanker unload.
CRITICAL	It is highly likely you have had a significant refrigeration issue and should contact your refrigeration engineer if not already done so. Or your refrigeration unit has been off, which may have been caused by a power outage. Your milk will likely receive a downgrade rating. This is likely to be equivalent to a R Bactoscan result. We recommend that you don't send this milk and dispose of it as per your council requirements.	We recommend making alternative arrangements for this milk. If supplied, milk will be Bactoscan tested (downgrades incurred apply), and a titratable acidity tested prior to unload. Any consequential losses will also apply. Insurance letter can be arranged for milk lost.

What data is available to me?

All the data you receive with your monitoring system is completely owned by and available to you as a Fonterra supplier. There are a few shared data points, detailed below, shared with Fonterra around volume and milk quality which allows the tanker fleet to operate more efficiently and ensures milk quality risks off farm are being managed appropriately

	Supplier	Fonterra
Live temperatures of milk in the vat	✔	○
Live Volume of milk in vat	✔	○
Temperature of CIP of vat	✔	○
Temperature of Plant Wash	✔	○
MQI Score	✔	✔
When you started milking	✔	✔
Whether you are milking or not	✔	✔
End of Milking (milk stop going into vat)	✔	✔
What caused an Mbacto test to be triggered	✔	✔



Benefits to the Co-operative

More milk for the Co-op

The amount of milk lost to milk quality issues has reduced.

This equates to approximately 2 million litres of extra milk supplied to Fonterra that previously would have been lost due to milk quality issues.

Higher quality milk

The average temperature and temperature failures at collection are the lowest they have ever been. With this higher quality milk, we can produce value products and return more to the suppliers.

Exceeding collection targets

Increased accuracy of MTW has allowed Collection In Full On Time (CIFOT) to consistently be at high levels every month. This is improving our service level to farmers, while reducing tankers in the fleet.

“ I have been farming for 34 years and *this makes life easier* for both workers and relief milkers. Especially the notifications when the vat chiller has been left off. ”

Adam Wainman

Frequently Asked Questions

How will our Co-op use this data/information?

Milk Quality

The Milk Quality Indicator (MQI) will be used for advisory purposes only until September 2021. We will use the MQI to support discussions with suppliers with the aim of improving milkvat cooling systems and milk quality where necessary.

Starting September 2021, our Co-op will use the MQI to inform testing. At first this could lead to more grading and demerits as farmers adjust and improve their systems to meet the Terms of Supply. The MQI will be used to identify low-quality milk and direct it away from high-value product manufacturing. For the highest risk milk, our Co-op will contact farmers and recommend they do not supply that milk.

Milk Cooling

The MTW will be calculated by us by using a rolling 15 day average determined by the milk vat monitoring system plus a buffer depending on the time of season. Therefore, the application of milk cooling grades will be based on these more precise milking times.

For more information on Milk Cooling please scan the QR code below



How can the Co-op support me if I need to improve my milk cooling?

Improving milk cooling infrastructure can be a significant financial investment and Farm Source has a unique opportunity to help make farming easier and help farmers comply with government requirements. For more information contact our On Farm Assets Team.

How much is this going to cost me?

The cost of the system provider's base model will be covered by your Co-op. If you would like any additional features you will need to pay for them. As per the Terms of Supply, you are required to ensure your device remains connected to a power supply.

Are the Terms of Supply or MPI's milk cooling requirements changing?

No, the Terms of Supply and the Ministry for Primary Industries' milk cooling requirements remain the same as outlined in section 10.1.14 in the Terms of Supply. For more information, see the Farmer Handbook.

How will this change what I do on farm?

The MVMS should not change any of your day-to-day practices. However, in the event of unforeseen incidents affecting the milk, this will provide you with early warnings. If your milk is not cooling as it should, for example, someone has forgotten to turn the pre-chiller system on, or there has been a power outage in the shed, you will get an alert from your vendor.

Our Team Is Here To Help

For all other queries please contact the
Farm Source Service Centre: **0800 65 65 68.**

