The Co-operative Difference

Fonterra Dairy for life

Milk Cooling Temperature Fact Sheet

Raw milk naturally contains low levels of bacteria. Quick effective cooling minimises bacterial growth and ensures that the best quality milk gets to your Co-op's manufacturing plants. Effectively cooled milk helps to reduce the likelihood of bacterial and/or senses downgrades.

Milk which is collected at elevated temperatures can put milk already in the tanker and milk at manufacturing sites at risk of failing microbiological and regulatory temperature requirements and can contribute to fat damage during pumping.

The Ministry for Primary Industries (MPI) regulates milk cooling through the Code of Practice for the Design and Operation of Farm Dairies NZCP1.

To view NZCP1, visit MPI's website **here**.

Milk Cooling Temperatures

MPI regulates milk cooling through the Code of Practice for the Design and Operation of Farm Dairies **NZCP1**, which states that milk must:

a) be cooled to 10°C or below within four hours of the commencement of milking; and

b) be cooled to 6°C or below within the sooner of:

i) six hours from the commencement of milking, or

ii) two hours from the completion of milking; and

c) be held at or below 6°C without freezing until collection or the next milking; and

d) must not exceed 10°C during subsequent milkings.

In situations where there is continuous or extended milking, such as automated milking systems, the milk must enter the bulk milk tank at 6°C or below. "Continuous or extended milking" is defined as milking for six hours or longer from the time that milk first enters any bulk milk tank.

What happens if milk is not cooled to the required temperature?

Because food safety is so important to the Co-op, we will only collect milk that is outside the above temperatures if we deem it to be suitable for supply, following a risk assessment.

With Milk Vat Monitoring Systems (MVMS) being installed on-farm, you will begin to see the Milk Quality Indicator (MQI) on your system provider's app. For more information on MVMS visit the **Farm Source website**.

The MQI will help you address any issues with your system that may be impacting the quality of your milk. The MQI will also inform Fonterra of the risk that the milk presented for collection may pose and may trigger for additional milk quality testing.

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

Other important information is:

- Fonterra will use an algorithm to calculate the MQI using the volume, agitation and temperature profile. This MQI is an estimate, based on the farm's data. The algorithm has been developed using real New Zealand milk data, so while it's only an estimate, it will be an accurate estimate.
- Bactoscan testing will be triggered if the MQI level alert is at or greater than "Medium".
- This bactoscan testing will be referred to as "Mbacto" and we will use this information to support our discussions with you to improve milk vat systems and milk quality where necessary. During this time, we'll also work with the system providers to calibrate the systems and ensure there are no discrepancies.

Refrigeration fault or power outage

If you have a refrigeration fault, contact Fonterra on 0800 65 65 68 to discuss next steps. If the milk is to be supplied, the Co-op will endeavour to arrange for an urgent collection.

As always with milk presented for collection, MPI cooling standards and other requirements outlined in the Fonterra Farmers' Terms of Supply "**Terms of Supply**" still apply.

How is my milk temperature measured?

The temperature of your farm's milk is measured by your MVMS and then during collection. Additional to this Fonterra is monitoring both the MVMS temperatures versus the tanker's collections temperatures. Where anomalies are found, they will be rectified. The pump on the tanker will cut off automatically if predetermined temperature thresholds aren't met. There's more information on milk collection temperature requirements in Section 8 of the Fonterra Farmers' Terms of Supply.

What if cooling issues have occurred and milk is not suitable for supply?

1. The first step is to secure the vat with an approved vat lock. These are available from your local Farm Source store.

2. Contact your Co-op as soon as possible to let us know you will not be supplying milk due to a cooling failure.

3. Dispose of the milk in accordance with your local Regional Council requirements if you do not intend to hold it on-farm for feeding to other animals on-farm. For more information on disposing of milk, see your Food Safety Practices and Procedures in the Dairy Diary or Dairy Diary app.

4. If you need assistance with your cooling system, contact your local service provider or call the Farm Source Service Centre on 0800 65 65 68 for some simple trouble shooting advice.

You are required to have a system for ensuring milk not intended for supply is secured to avoid accidental collection.

Lock and label the vat.

Milk Quality Framework

Temperature failures will be assigned to each collection that does not meet the requirements set out in the Terms of Supply section 8.1.

The first two failures in a calendar month will not incur downgrades. The third and subsequent failures will incur downgrades. This provides a clear and consistent approach where minimum standards are not being met, helping to protect the reputation of your industry and Co-op. For more information see the Terms of Supply section 10.1.14.

Your MVMS system automatically updates your milking time windows and factors in time for washing the vat. Due to the system working off historical data it is still important to let Fonterra know of any cycle changes and to check and adjust your Milking Time Window at the start of season.

If your Co-op doesn't collect or rejects your milk based on it not meeting temperature requirements, you will be considered not to have supplied that milk to Fonterra. You need to dispose of that milk at your own cost and it cannot be presented again for collection (see Clauses 8.1 and 1.6 / 1.7 in the Terms of Supply). Any milk pumped on to the tanker to verify the temperature may be subject to quality testing, and any downgrades you receive for presenting this milk will stand.

Deduction Allocation Form

Recognising that not all farm systems provide the sharemilker with complete control over farm inputs, owners may opt to share the cost of any Milk Cooling Temperature downgrades.

To support owners and sharemilkers in their desire to share any testing fees and downgrades incurred, we have a deduction Allocation Form available. Fonterra will support a unique allocation of Milk Cooling Temperature downgrades so long as we have authorised instructions to do so and will require a signed form or an email from the authorised person on-farm.

NOTE: The percentage split elected for Milk Cooling Temperature downgrades can be different to the percentage split for other downgrades or deductions. Testing fees and downgrade deductions will be treated as a total cost, of which the percentage can be split between owner and sharemilker.

Support

If you'd like to access a deduction allocation form, or have any other questions about Milk Cooling you can talk to your Area Manager or call the Service Centre on:

0800 65 65 68