

# LIC Semen Quality Issue October 2023

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Summary of the investigation and  
independent review

Released: February 2024

## Foreword

Getting cows in calf is what we do - and we have a very good track record at doing just that.

Last year, impacted farmers were notified of a quality issue that affected some batches of semen straws that were inseminated on farms in October. We acknowledge the impact this situation caused for individual cows in herds and we are disappointed that, in this instance, we didn't deliver to the high standard farmers expect.

### **Our investigation concluded the possible cause to be a bacterial contamination.**

The investigation report made recommendations for improvements to reduce the likelihood of this ever happening again and we are committed to implementing the recommendations.

Many of those recommendations have already been implemented, including a change we made immediately after we identified we were dealing with a quality issue - we brought forward daily semen quality control checks to 4am every morning prior to insemination on farm on that given day. This change means we can notify AB Technicians of any issues and ask them to use back up semen instead, so we can still get cows in calf. Since implementing this change, we haven't had further issues.

Our commitment to all our farmers across New Zealand is that we will never stop looking for that next one percent improvement. We know all these improvements add up and that's what keeps our dairy sector profitable and sustainable.

As the Board Chair and Chief Executive of your co-operative, we will continue to scrutinise and enhance our robust operations and processes, to deliver you the right tools to breed the most sustainable and profitable herds - now and into the future.

We would like to thank farmers for their understanding and commitment to their co-operative.



**Corrigan Sowman**  
Board Chair, LIC



**David Chin**  
Chief Executive, LIC

## Background

### What happened

LIC's routine semen quality checks identified a concern with some batches of fresh conventional Premier Sires straws inseminated on farms between 17 - 19 and 23 - 25 October.

20 batches were impacted by the quality issue and 1,127 herds across New Zealand experienced varying degrees of impact.

As soon as LIC was aware there was a batch quality issue, the co-operative began communicating with all affected farmers.

LIC then conducted a thorough internal investigation, looking at all operational processes and possible improvements. An independent review was also carried out by a third party to look in to LIC's response to the issue.

All farmer shareholders were updated on 20 February 2024 on the outcomes of the investigation and independent review.

### What LIC did in response

When it was apparent LIC was dealing with a quality issue, impacted farmer shareholders were promptly notified to ensure transparency and address concerns.

At the same time, LIC implemented immediate changes to its quality control checking process. Now, daily quality control checks occur at 4am every morning prior to insemination on farm on that given day. This change means LIC can notify its AB Technicians of any issues and ask them to use back up semen instead, so cows can still get in calf. Since implementing this change, LIC has seen no further issues.

In late November, LIC held a live call for all farmer shareholders to hear directly from LIC Chief Executive, David Chin, and Board Chair, Corrigan Sowman along with LIC's senior leaders.

On 26 October, the co-operative initiated a thorough internal investigation into the root cause of the issue to decrease the likelihood of future occurrence. An independent review was also carried out to investigate LIC's response to the event.

### What LIC did to support farmer recovery

Recognising the impact on farmers, LIC worked closely with the co-op's Board and Shareholder Reference Group to formulate a comprehensive support package. This package included account credits and goodwill payments tailored to the extent of impact.

The credit and goodwill packages were as follows:

- All affected inseminations across all 6 days were credited to the value of the original product used.

In addition:

- All CIDR inseminations across all 6 days were credited a goodwill payment of \$30 per insemination.
- All affected inseminations on 18, 19, 24 and 25 October were credited a goodwill payment of an additional \$30 per insemination. This recognised the greater impact identified on these days.
- Any herd where more than or equal to 10% of the herd size were inseminated on 18, 19, 24 and 25 October, a further \$30 credit per insemination was credited.

In addition to the account credits and goodwill payments, LIC continues to provide guidance and assistance through their team of nationwide Agri Managers to help farmers with their recovery and mating plans for the upcoming season.

## The Investigation

On 21 November 2023 an investigation commenced to determine the likely cause of a low Non-Return Rate (NRR) for the Long Last Liquid (LLL) semen provided to farms between the dates 17 - 19 October and 23 - 25 October 2023.

The investigation has been thorough, looking at operational processes and possible improvements. From bull to on-farm insemination, the co-operative has considered all possibilities.

The investigation was undertaken by the co-operative's Transformation Team. This taskforce was given the mandate to investigate all possible causes and had access to expertise to carry out extensive testing and reviewing over several months.

Some external expertise was provided by third party laboratories to do trace chemical testing as part of investigating causes. In addition, and to support the taskforce responsible for the investigation, multiple staff members from management to frontline staff were confidentially interviewed.

The taskforce was asked to provide formal recommendations for how LIC can reduce the likelihood of issues impacting semen quality in the future.

While the investigation had a wide initial scope and areas of focus, including examination of diluent preparation, microbial product contamination, product contact contamination and cleaning contamination, and deliberate interference, the investigation scope narrowed to two main areas. These were:

1. Analysing the affected batch straws from the two impacted days of collection and processing and;
2. Undertaking trials with new collections in an attempt to recreate the semen decline in mortality and motility over the three days.

## Summary of outcomes

### **LIC's investigation has concluded the possible cause to be a bacterial contamination in 15 batches of semen which were collected on 15 October and 5 batches collected on 21 October.**

With the limited number of straws LIC had access to from the affected days (which LIC routinely freezes for research purposes), a number of tests were carried out. Through those tests, LIC was able to narrow it down to a possible cause, it was not possible to identify the exact root cause of the bacterial contamination due to the many factors that influence a biological product.

Some of the bacteria identified were known to be bacteria that can impact semen, therefore a possible cause.

Through the investigation, LIC was able to eliminate many possible causes through tests and trials where the co-operative recreated possible scenarios that could have taken place on the impacted collection days.

Areas that were investigated and subsequently eliminated as causes were:

- Incorrect diluent preparation
- Contamination from heavy metals or toxins
- Contamination from reusable equipment
- Deliberate interference

While LIC's current investigation is complete, there is always room for improvement and if LIC identifies any other areas for further investigation, it will be immediately prioritised by the co-operative.

The investigation report outlines recommendations across the following areas:

- Quality control checks testing and monitoring
- Technical knowledge and training
- Traceability
- Production hygiene facilities and work processes

The recommendations across the above categories will reduce the likelihood of this issue ever happening again and LIC has committed to implementing all of the recommendations.

## The Independent Review

An independent review was carried out to formally assess the way LIC took action in response to the issue. The detailed review identified areas of improvement when it came to managing risk, responding to events and communicating effectively and efficiently.

The review involved multiple confidential interviews with staff and impacted farmers, as well as a review of LIC's systems and processes.

The independent review was carried out by an external third party. LIC's Management tasked them to review the ways LIC took action in the days and weeks following the first awareness of the semen quality issue.

The objective was to assess the management response undertaken by LIC in dealing with the issue. The focus was on how LIC can improve its response to these situations should they ever occur again. The scope covers LIC's response processes to the event from 19th October to 30th November 2023.

While the independent review closely analysed timeliness and effectiveness of response actions, it was also required to look into any inactions or inefficiencies covering:

- Roles and responsibilities
- Incident identification and response activation
- Information management and sharing
- Command and control approach
- Decision making and response resources
- Communication and stakeholder management
- Governance, processes and technology

The independent review did not include assessing the laboratory quality processes or investigating the cause of the issue.

## Summary of outcomes

The independent review acknowledged the report has the benefit of hindsight and that LIC had to manage the situation in real-time with the best information available to them.

It was observed that once the scale of the impact was realised, LIC very quickly demonstrated that it had the best interests of farmers at heart and mobilised a large number of personal calls to the most affected farmers to develop focused solutions.

The observations and recommendations from the independent review cover:

- Updating internal risk management protocols to guide decision making
- Refreshing incident management process and training
- Identifying and assigning key people for future events
- Considering and reviewing methods of communication and timing of communication to farmers and employees.

LIC has committed to implementing all of the recommendations.

## LIC's Response to the Investigation and Independent Review

### What LIC has already implemented

When LIC first identified this issue, the co-operative made immediate changes to its quality control checking process. This has been the most significant change. Now, daily quality control checks occur at 4am every morning prior to insemination on farm on that given day. This has been immediately implemented to provide added reassurance to LIC's farmers.

LIC intends to go beyond the report's recommendations to investigate and improve our processes. The co-operative is doing this by seeking advice from external experts including microbiologists, food safety and assurance professionals and our international semen processing partners.

### What LIC is still to implement

Over half of the recommendations from LIC's internal investigation will be in place by the end of March 2024 with the rest being completed over the next 12 months.

The co-operative continues to take this issue very seriously. To reduce the likelihood of this ever happening again, LIC is committed to implementing all of the recommendations made as a result of both investigations and will keep farmers fully informed as it implements changes in line with the recommendations made.

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## Conclusion

Getting cows in calf goes to the core of what LIC does - and LIC has a very good track record at doing just that.

As a co-operative, it's LIC's job to support farmers and provide them with the right tools to breed the most sustainable and profitable herds, now and into the future.

For decades, LIC has delivered premium genetics to farmers without an issue like the one the co-operative and its farmers experienced in October 2023.

In response, the co-operative mobilised an internal investigation team and outsourced an independent review. The purpose of these enquiries was to uncover what happened and how LIC can learn from this and avoid it from ever happening again.

The investigation concluded the possible cause to be a bacterial contamination. While LIC was able to narrow it down to a possible cause, it was not possible to identify the exact root cause of the bacterial contamination.

LIC would like to acknowledge just how challenging this period has been and extend appreciation to farmers for their ongoing support and commitment to their co-op. Farmers showed resilience and patience as LIC navigated its way through the issue and subsequent investigations.

The co-operative is always looking at ways it can improve to deliver New Zealand farmers the best products and services on farm, and is committed to keeping farmers informed as improvements are implemented.





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