



EMERGING RISK INTELLIGENCE SERVICE

Enhancing Food Safety in New Zealand

Signals

Issue 13
October 2026

A quarterly brief on emerging food safety issues (Jul–Sep 2026)

Project funded through the



New Zealand
**FOOD SAFETY SCIENCE
& RESEARCH CENTRE**

and delivered by



**PHF
Science**

Publication information

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Emerging risks rarely emerge from nowhere

Emerging risks are often described as “new risks”, yet many arise from known hazards. The challenge is recognising when changes in technology, consumer behaviour, environmental conditions or food systems create more opportunities for a hazard to cause harm via food.

It is still relevant to ask questions like “what is the next foodborne hazard?” or “could this newly identified human health hazard cause harm via food?” But it is more important to ask, “how could this situation change foodborne exposure to a hazard?”

When food safety outbreak root cause investigations are published, the findings are usually not surprising but sometimes, the cause is an unanticipated food safety failure. Yet even then, hindsight often

shows this was technically knowable: The hazard was not new, the conditions were suitable, and hazard detection was possible. The failure, perhaps, was not recognising the potential for the situation to arise due to gaps in systems, knowledge, food safety culture – or imagination – particularly if there are novel food production technologies being introduced.

We most certainly can’t predict everything, but we can think our way to greater preparedness. Horizon scanning tools help identify weak signals, emerging patterns or plausible future risks to help us mitigate or avoid future harms.

News from the network

Food Standards Australia New Zealand published the 2025 results from its consumer insights survey, involving approximately 1,200 Australian and 800 New Zealand adults. The top three food safety issues were 'food poisoning, like salmonella', 'chemicals from the environment in food' and 'contamination of food with foreign objects'. These were also the top ranked issues for 2023 and 2024. Self-reported food safety behaviours, such as practices for managing leftovers or safely managing or cooking raw meat, showed unsafe practices were still occurring.

The European Food Safety Authority published their annual summary of emerging risks and horizon scanning activities, detailing their actions and decisions on a wide range of topics. More widely, a multi-agency team is investigating the feasibility of a

pan-European early warning system that will help identify emerging chemical risks earlier and support coordinated action.

New Zealand Food Safety’s September newsletter highlighted the threats to the food system from cyber attacks and the importance of cyber security to maintain safe and suitable food. While this current ERIS newsletter was in preparation, a cyber attack raised the temperatures of fridges and freezers across multiple stores in France, resulting in food waste and equipment damage.

In November, the NZFSSRC will host a Futures Forum to discuss New Zealand’s future food safety challenges.

Links: FSANZ [consumer insights](#), EFSA [2025 emerging risk report](#), EU [chemical early warning system](#), NZFS [newsletter](#), French Computer Emergency Response Team [security alert](#), NZFSSRC [2026 Futures Forum](#)

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Summary of activities

Of interest since Issue 12 were:

- 1 emerging issue concerning food or the food industry.
- Signals prompting updates to 26 identified emerging risks.
- 35 signals that did not meet the requirement of being a foodborne emerging risk to human health.

NZFSSRC members will decide if they want to undertake actions on these signals or identified emerging issues.

Featured emerging risks and issues

Chronic low-dose exposure to pesticide mixtures. Pesticide residues in food are managed through pre-market assessment, authorised conditions of use, maximum residue limits, and national and international monitoring programmes. Residues from several pesticides can be simultaneously present on a food. There is evidence of biological effects following chronic, low-dose exposure to pesticide mixtures, but this largely comes from occupational studies, animal models and *in vitro* experiments, so the significance of such studies to real-world consumer exposure is unclear. There is a need to better understand the effects of chronic exposure to low-dose pesticide mixtures to ensure consumer safety and food security.

Infant formula dispensing machines. Machines are now available to speed up the preparation of infant formula, which dispense either warmed water or ready-to-drink formula. User hygiene and machine maintenance are critical for ensuring the infant formula remains safe for consumption. Poor cleaning will create ideal conditions for bacterial growth. No reports of outbreaks linked to the use of infant formula machines were located, although any illness linked to these machines are likely to be sporadic.

Thallium in food and drinking water. Thallium is a growing concern in drinking water from contaminated environments. There also appears to be increased scientific and regulatory interest in thallium in the food supply, but data are scarce. Some food plants hyper-accumulate metals from their environment, including thallium. High thallium concentrations in kale chips have caused safety issues.

New information on selected identified issues

- **Food contact materials containing bamboo and other plant-based materials.** Laboratory testing did not find safety concerns from cork-based composites intended for food contact applications. [Vieira et al. \(2026\)](#)
- **Foodborne transmission of microsporidia.** A review of marine and aquatic microsporidia identified seafood as a potential vehicle of infection, but foodborne transmission remains unproven. [Bekircan et al. \(2026\)](#)
- **Allergenic potential of alternative proteins.** A 'worst case' pilot scale investigation found some food allergens in an insect rearing substrate were detectable in black soldier fly larvae, even after fasting. [Tramuta et al. \(2026\)](#)
- **Potential risks from fungal mycelium as a food.** A review found that when mycotoxins were detected in edible mushroom cultures, the mycelium had lower concentrations than the fruiting body. [Berglund et al. \(2026\)](#)

Some other observations

- A review article summarises the scientific journey towards developing industry-ready serum-free media for safe cultivated meat production.
- Testing of a range of packaged, edible flowers from Italian markets showed that microbial counts increased during refrigeration, but no pathogens were detected.
- Inspections of premises serving the popular quick commerce market in India again uncovered unhygienic conditions. Scrutiny of all e-commerce platforms is increasing.
- An analysis of foodborne illness outbreaks in New South Wales, Australia, shows that mixed ingredient dishes are more frequently implicated, particularly sandwiches.
- A novel virus has been identified as the likely cause of acute illness in dairy cattle in France. There is no evidence for foodborne transmission or human infection.
- A survey of food-grade recycled plastic beverage bottles and resin pellets in Canada generated data on their chemical profile. The study did not include beverage testing.
- Researchers have used yeasts to convert a pre-treated mix of plastic and plant biomass into food ingredients and flavours, making edible cookies.

Links to:

Cultivated meat media review by [Liu et al.](#)

Edible flower survey by [Ciliberti et al.](#)

Q-commerce reports on [incidents](#) and [response](#), 2025 media

NSW outbreak analysis by [Franklin et al.](#)

Report of Shamonda virus by [Kelleci et al.](#)

Recycled packaging survey [Xu-Liang et al.](#)

Yeast derived cookie [abstract](#) and [article](#)