



**EMERGING
RISK
IDENTIFICATION
SYSTEM**
Enhancing Food Safety in New Zealand

Monthly Brief

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& RESEARCH CENTRE**

New Zealand Food Safety
Haumaru Kai Aotearoa

Welcome to Issue 13. ERIS is in year two of a two-year project. Our focus is on upskilling, expanding networks and continuous improvement. We are starting to think about what a long-term system could look like and how it may be funded.

Introducing Anna Rathé Strategy and Risk Policy Team Leader, Horticulture New Zealand

ERIS Role: Action Forum member.

With a background in biosecurity and an interest in horizon scanning, Anna works across many areas, including food safety. HortNZ co-funded ERIS to stay up-to-date with emerging food safety risks that may be relevant to horticulture. As a pan-sector organisation, HortNZ has a particular interest in risks relevant to multiple crops.



Involvement in ERIS has highlighted the many similarities in how we think about emerging risks and risk management across both the food safety and biosecurity systems.

Now we know, what do we do about it? The purpose of this Emerging Risk Identification System is to gather intelligence on emerging food safety issues and support decision-making by the food industry over future research. Or more simply, turning intelligence into action.

Any identified emerging risks are taken to the Emerging Risk Action Forum (see [Issue 3](#)). These are discussed at a quarterly meeting and decisions are made about any actions needed. The actions might be as simple as sharing information with a specific group or person. The ERIS team can also be asked to gather information to answer specific questions: We've done this for 20 emerging risks so far, with the information for one being used to support a research proposal.

Often these questions arise because a member of the Action Forum is thinking about the emerging risk in the context of their food business.

For example, when discussing cyanotoxin contamination of irrigation water, we needed to understand whether cyanotoxins could end up in meat or milk if farm animals drank toxin-containing water.

These investigations help identify research needs.



FoodMicro2022 conference. This conference was held from 28-31 August in Athens, Greece and online, after cancellations in 2020 and 2021. Organised by the International Committee on Food Microbiology and Hygiene, the 27th biannual meeting theme was 'Next Generation Challenges in Food Microbiology'. Emerging risk systems were front and centre with the European Food Safety Authority's Tobin Robinson opening the conference with a keynote lecture on their emerging risk system. Of particular interest was their inclusion of *risk perception* among their considerations: How do people perceive a risk? This topic has been discussed by the ERIS Action Forum and Identification Panel. Two of the four poster sessions, 'Food Microbiology in the context of One-Health' and 'Food Safety in 2050 – is it too early?', raised topics that were relevant to ERIS. <http://foodmicro2022.com/>

The NZFSSRC member organisations funding ERIS are:



Featured emerging risks and issues

Furan, methylfurans and alkylfurans in foods. Furan, a potential carcinogen, is a known process contaminant found in heat treated foods. Coffee is an important dietary source. Methylfurans and alkylfurans also form in these foods. These might also be hazardous but studies are needed to confirm this, as are data on the concentrations of these compounds in foods. Future dietary risk assessments are likely to consider all of these compounds together. However, if these assessments indicate health risks it might be difficult to reduce these compounds in foods without increasing the risk that the foods become unsafe, or of unacceptable quality.

Summary of activities, September 2022.

New emerging risks and issues. One emerging risk concerning food was identified in September (*above*).

A briefing note is being prepared. The Action Forum will decide if they want to undertake actions on identified emerging risks. Briefing notes sourced from publicly available information can be provided by the coordinators to NZFSSRC members upon request.

Other assessed emerging issues. There were 14 emerging issues assessed during September that did not meet the requirement of being a foodborne emerging risk to human health. A list of these emerging issues is maintained for later review. Examples include:

- New species of mycotoxin-producing *Fusarium* fungi identified. https://doi.org/10.1007/978-3-319-01619-1_5 *Researchers have identified several new fungal species but not new toxins.*
- Animal feed identified as a transmission route for Senecavirus A. <https://doi.org/10.1111/tbed.14684> *Senecavirus A causes disease in pigs but is not a foodborne, human pathogen.*
- Death reported in Japan after consumption of autumn crocus (*Colchicum autumnale*). <http://www.promedmail.org/> *Not a new hazard: Sporadic cases are reported linked to mistaken plant identity.*
- Modifying natural lipids to make functional structured lipids. <https://doi.org/10.3390/foods11162400> *Still under research: Not yet at food ingredient stage or scale.*

Some other observations. For interest, not currently in the ERIS Emerging Risks Register.

- The Joint FAO/WHO has concluded with the release of their fourth report. Good practices remain the most effective way of reducing the risk of fresh produce becoming contaminated with pathogens. Of note was a lack of industry-ready, post-harvest treatments, with those available tending to target bacteria. Viruses and parasites on fresh produce also cause outbreaks. A full report will be published. <https://www.who.int/news-room/events/detail/2021/07/12/default-calendar/joint-fao-who-expert-meeting-on-the-prevention-and-control-of-microbiological-hazards-in-fresh-fruits-and-vegetables>
- A survey of over 3000 households in the UK, Germany and Norway quantified the proportion who believed in food safety 'myths', then looked at whether these beliefs correlated with the number of times people in each household had gastroenteritis. The work showed links between some of the beliefs and getting sick. <https://doi.org/10.1016/j.foodcont.2022.109210>

Further information. This brief has been prepared for the NZFSSRC's funding and partner organisations by Nicola King (ESR), with the support of Seamus Watson (ESR), Kate Thomas (NZFS) and Abhi Gautam (ESR).

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New Zealand Food Safety Science and Research Centre (NZFSSRC). <https://www.nzfssrc.org.nz/our-work/eris/#/>

New Zealand Food Safety (NZFS). www.mpi.govt.nz/food-business

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