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Food for Thought

Embracing Food Safety Risk Management

Thought Leadership Series

DELTA™ INSURANCE

Inside

Managing Food Recall Risks

Risk Management Essentials

Food manufacturing has become increasingly vital to the success of the New Zealand economy, currently representing 3.75% of our total GDP and 71% of our manufactured goods exports. Future prospects for the sector are promising, with the Ministry for Primary Industries (MPI) anticipating a dramatic increase in food manufacturing exports from $7 billion to $30 billion by 2025[1].

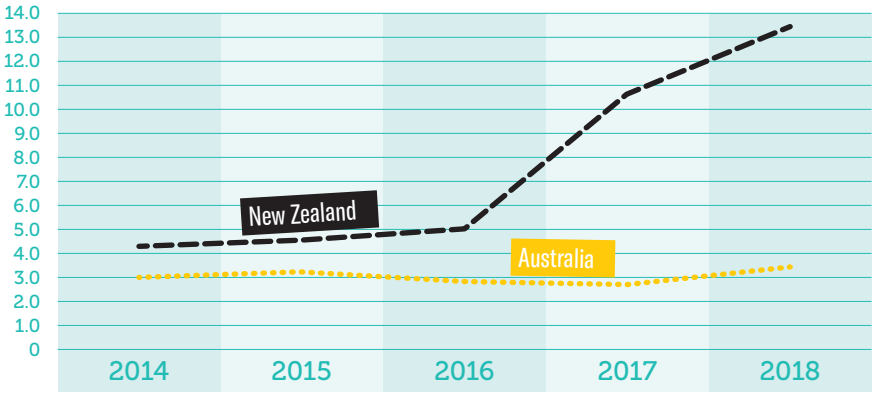
New Zealand's reputation for safe, high-quality food is a crucial part of the industry and the economy. Maintaining and increasing this level of trust with consumers is essential to building our export base for manufactured food, particularly when we are competing with a large number of global food brands with marketing acumen and deep pockets.

Is this reputation well deserved?

A food recall occurs when there is a food-safety issue, either within a business or an industry. New Zealand's food recalls have increased significantly in the last three years since the introduction of the Food Act in 2016[2]. While there is a strong correlation with the introduction of the Act, this could also be a result of increased awareness of allergens and food safety amongst consumers.

However, if this trend continues, there is potential to jeopardise our international reputation which has been carefully built over many decades. While tangible risks can be insured, the damage to a food brand, and indeed a country brand, can be longer-lasting.

New Zealand vs. Australia Recalls Per Capita 2018



Small-to-medium enterprises (SMEs) are particularly vulnerable to the serious impacts of a food recall, as a lack of capital and experience managing reputational damage can have an irreversible effect on a business.

This white paper is designed to provide an overview of the food-safety and recall risks associated with food manufacturing businesses and includes the evolving trends of food-safety recalls, the regulatory framework businesses must conform to, and a range of risk-mitigation principles that can be implemented to avert food-safety and recall incidents. This paper will focus on strategies to manage food-recall incidents, and the crisis surrounding the incidents, how to minimise reputational and financial damage, and how Food Manufacturing Liability insurance can be used to transfer these risks and safeguard a business.

Could it happen in New Zealand?

Incident

In May 2012, a piece of plastic fell into a dryer containing whey protein concentrate (WPC80) at the Fonterra Hautapu plant in the Waikato[3].

Plant managers decided to rework the WPC80 to remove the fragments using a method that was outside the plant's risk management programme. This subsequently exposed the product to clostridium sporogenes which itself isn't a food-safety hazard. However, a lack of sophisticated testing couldn't rule out the presence of clostridium botulinum, which posed a potential food-safety issue[3].

The concentrate was added to various products at other Fonterra plants, including infant formula, yoghurt, beverages, and powders for sports drinks. This was then exported to Australia, China, Vietnam, Saudi Arabia and Thailand[3].

Fonterra then implemented a precautionary recall on 2 August 2013 based on a third-party testing of the concentrate and notified MPI of the unfit product[3].

Further testing proved the strain to be sporogenes rather than the harmful botulinum, but the reputational damage had already been done, as well as a $300,000 fine under the Animal Product Act[4].

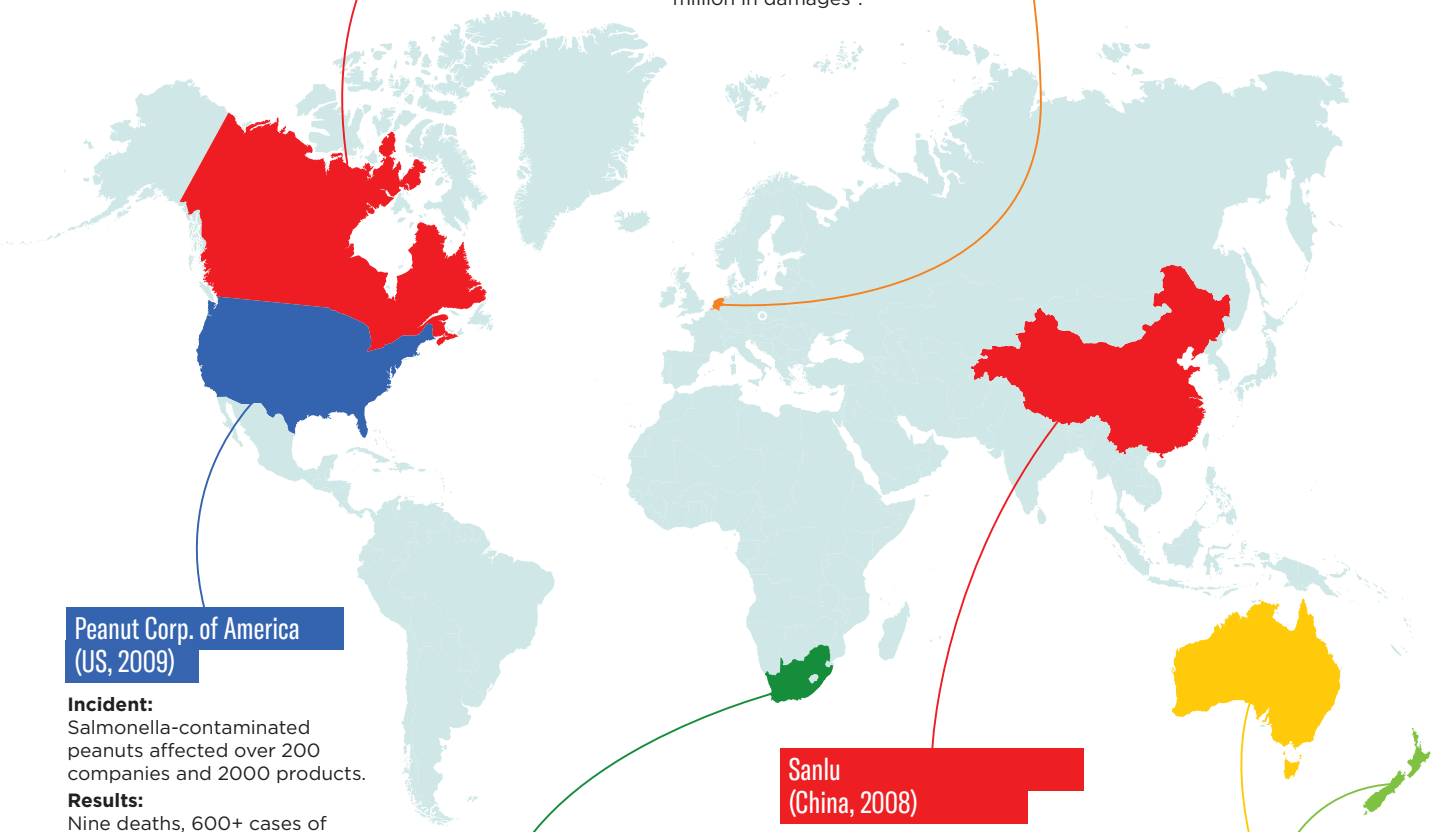
Short-term consequences

- China banned the importation of whey and whey-based protein powder.
- Russia, Kazakhstan and Belarus all temporarily banned imports and sales of Fonterra dairy products.
- Vietnam immediately recalled and halted distribution of Fonterra-manufactured milk powder.
- South Korea, Saudi Arabia and Bangladesh required increased levels of testing on certain products.
- The New Zealand dollar depreciated over 1%.

Long-term consequences

- Fonterra struck deals with seven out of the eight customers affected.
- However, Danone and Fonterra could not agree, so in 2014 Fonterra set aside $14 million as a contingent liability.
- The dispute went to an international arbitration tribunal and Fonterra was forced to pay Danone $183 million in 2017.
- Danone is no longer a Fonterra customer [4].

Significant product recalls internationally



Maple Leaf Foods (Canada, 2008)

Incident:
Listeria contamination of cooked deli meat.

Results:
23 people dead, 57 hospitalised in 2008. Maple Leaf forced to pay US$25 million in damages[6].

ChickFriend (Netherlands, 2017)

Incident:
Fipronil (flea poison) contaminated chicken eggs and other egg products across Europe and Asia.

Results:
Safety measures and damages estimated to cost at least 150 million Euros to the Dutch chicken industry[7].

Peanut Corp. of America (US, 2009)

Incident:
Salmonella-contaminated peanuts affected over 200 companies and 2000 products.

Results:
Nine deaths, 600+ cases of illness, bankruptcy for PCA and US$1 billion loss for the industry[5].

Tiger Brands (South Africa, 2018)

Incident:
Listeria-contaminated processed meats.

Results:
216 deaths, over 1,000 reported illnesses, stock value dropped by US$438 million, compensation still sought[9].

Sanlu (China, 2008)

Incident:
Melamine was frequently used to boost protein results for infant formula testing.

Result:
Six infant deaths, 300,000 hospitalised, criminal charges laid, long-term health effects unknown[8].

Patties Food (Australia, 2015)

Incident:
Hepatitis A outbreak linked to frozen berries.

Results:
At least 18 infected across Australia, 87% decline in net profit. Total losses to the company in excess of AU$8 million.

Food safety risks and recall trends

A global investigation into the impact of contaminated food on people's health and wellbeing found that 1 in 10 people fell ill following the consumption of contaminated food[10].

Food contamination

In New Zealand in 2018, physical contamination accounted for 14 recalls compared with six the year before and biological contamination accounted for 11 during both years. Until recent years physical and pathogen contamination were the most common causes of food recalls but recent trends suggest allergens are increasingly drawing the attention of regulators*.

Biological contamination occurs when bacteria, viruses or parasites spread into food or beverages. Some bacteria (e.g. listeria and salmonella) are dangerous by themselves. Other bacteria may be harmless, but the waste produced by the bacterial multiplication process can be toxic and harmful to humans (e.g. **bacillus cereus**, found in rice).

Listeria is a food-borne bacterium found in raw meat, dairy, soft cheese, fruit and vegetables. It usually affects those with weakened immune systems and pregnant women. 15% of packaged, ready-to-eat meat contained the listeria bacterium, a 2011 study found[11]. In 2018, a listeriosis outbreak was linked to rockmelons that killed seven people and caused a miscarriage in Australia. Between January and April 2018, 22 cases of listeriosis were caused by people eating contaminated rockmelons from one Australian grower[12].

Chemical contamination occurs when food comes into contact with chemicals such as pesticide residue, kitchen cleaning agents and chemical agents which can be harmful if consumed.

Physical contamination occurs when common objects such as hair, nails, glass, metal or dirt come into contact with food.

Cross-contamination is a common cause of these incidents, and involves unintentional transfer of a foreign substance through people, other food or equipment to a food product.

Allergens

Allergens are the number-one reason for food recalls in New Zealand. Of 66 total recalls, 25 related to undeclared allergens and another four to unclear labelling[2]. Undeclared allergens are often a result of

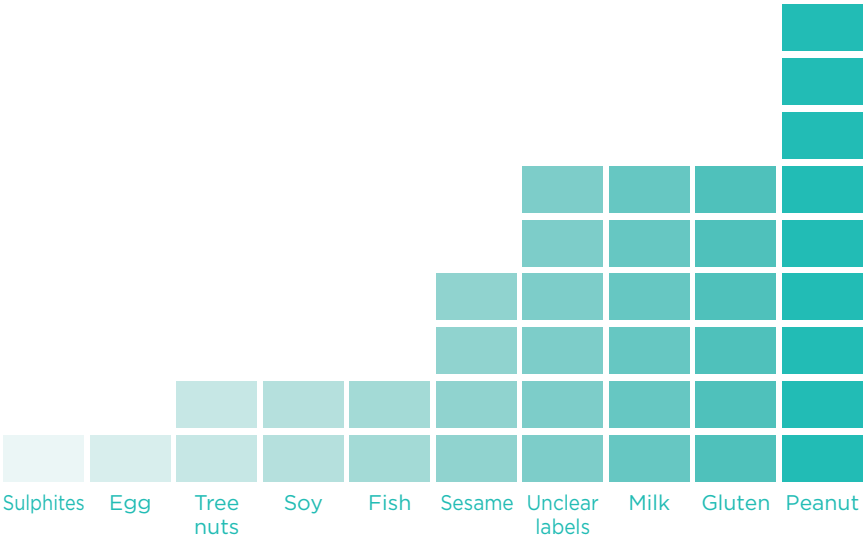
Reasons for 2018 Recalls in New Zealand*

unintentional cross-contamination, manufacturing errors or from products sourced from countries with soft food laws around allergens. It is the responsibility of food importers to know what is in imported food and make sure it meets New Zealand's labelling rules. Likewise, manufacturers are responsible for knowing what is in the ingredients they use and to make sure final food meets New Zealand's labelling rules. Recent allergen recall trends suggest a strong correlation between clearer, new regulations around labelling, the ever-expanding, complex global supply chain and food fraud.

One of the major risks of manufacturing food products is the impact on those susceptible to allergic reactions. These reactions can lead to itching, hives, nausea, diarrhoea and anaphylaxis, so any contamination or mislabelling has the potential to be life-threatening. Food allergies affect 10% of all infants, 6% of children and 2% of adults globally[10]. The eight foods that cause 90% of all food-allergic reactions are peanuts, tree nuts, milk, egg, wheat, soy, fish and shellfish.

Mandatory declaration of substances when they are present in food
Cereals with gluten
Egg
Milk
Peanuts
Sesame seeds
Tree nuts
Soy
Lupins
Fish
Crustaceans
Sulphites (10 mg/kg or more)

Number of allergen recalls in New Zealand in 2018



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Mislabelling

Human and equipment error are the two main factors that lead to unintentional mislabelling or mispackaging of food during the manufacturing process. Human error is usually caused by distractions, fatigue, the inability to keep up with the speed of production, lack of communication or a lack of knowledge. Equipment error is less common and usually caused by a lack of maintenance.

Complex supply chain

New Zealand food manufacturers regularly source ingredients and produce from overseas suppliers. Additionally, they can outsource manufacturing due to lack of in-house and local capability, and financial viability. This supports an efficient global supply chain but also presents new challenges and risks in relation to quality control. While it is the importer's responsibility to ensure safe and suitable food, lack of sound food-safety practices and a lack of understanding of the New Zealand food regulations in the country of origin pose a great risk for New Zealand food manufacturers. Not having control over the supply chain creates its own set of risks for a business, such as:

- the inability to react immediately to changing circumstances
- hidden costs
- liability issues if a supplier contract is not closely read or understood
- issues with a supplier and continuity issues with key ingredients
- being kept unaware of important changes to an ingredient or safety issues.

Food fraud and non-conformance recalls

Food fraud is the deliberate misleading of consumers or regulators for economic gain by changing or misrepresenting food products. Food fraud, including counterfeiting, is on the rise and iconic New Zealand produce such as kiwifruit and manuka honey[31] top the scale of popular products for counterfeiting in Asia*. Although there may be no intent to harm consumers, such negligence can often lead to harmful outcomes. Organisations need to be aware of how an employee may benefit from food fraud (e.g. achieving performance bonuses). Twelve out of the 66 food recalls in New Zealand last year were initiated by regulators for lack of traceability, non-conformant labelling and a lack of process control*. Our presumption from this is that an increase in recalls from non-conformance and undeclared allergens, suggests a strong correlation between it and the new food regulations. Another trend on the rise is an increase in unsubstantiated food claims where there is lack of traceability, and in some cases where the producers intentionally mislead the customers, e.g. through the use of words like gluten-free, halal and free-range. This is most prevalent in "free range", as MPI does not regulate product descriptions, whereas terms like gluten free is a nutrition claim and must meet the standards set. While the fraudulent acts and misleading labelling can result in a recall, most of these recalls and the associated costs and losses are uninsurable.

Twelve out of the 65 food recalls in New Zealand last year were instigated by regulators for lack of traceability, non-conformant labelling and a lack of process control.

The importance of labelling

Companies must ensure their food labels are easy to understand and are compliant with both the Australia New Zealand Food Standard Code and the Consumers' Right to Know (Country of Origin of Food) Act.

Over-labelling

An American survey found 96% of consumers wanted health benefits from their food, but only 45% could identify a single food or nutrient that could be associated with that health benefit[13]. 78% of consumers said they received conflicting information on what to eat, partly from over-labelling[13]. Communicating nutritional values and their meaning helps to keep consumers better informed and more likely to buy the product[13].

Nutrition Facts

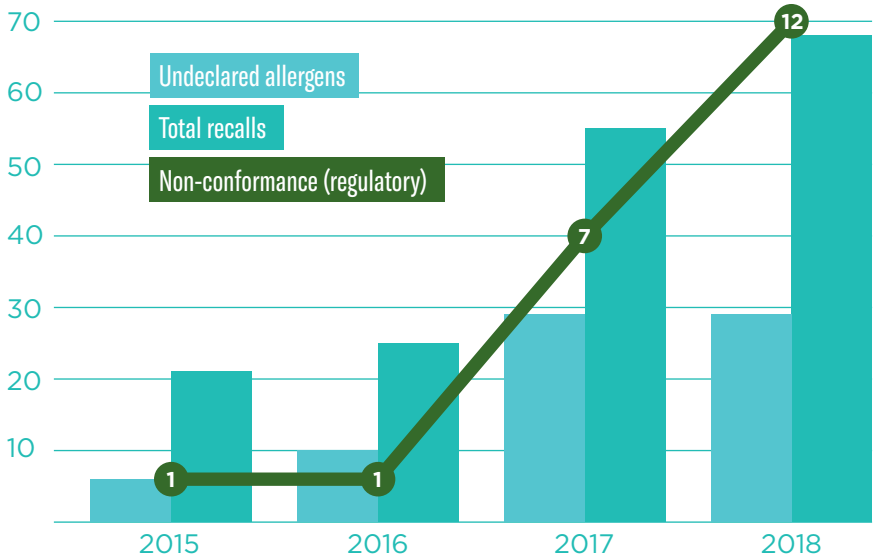
Serving Size 100 g

Amount Per Serving	
Calories 250	Calories from fat 10
	% Daily Value*
Total Fat 4%	4%
Saturated Fat 1.5%	4%
Trans Fat	
Cholesterol 50mg	28%
Sodium 150mg	15%
Total Carbohydrate 10g	3%
Dietary Fiber 5g	
Sugars 3g	
Protein 16%	
Vitamin A 1% • **Vitamin C** 3%	
Calcium 2% • **Iron** 2%	

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

SAMPLE - US NUTRITION FACTS PANEL

Non-conformance and allergen recall trends before and after introduction of Food Act 2014*



Food terrorism and Industry 4.0

Food terrorism is the threat or act of intentional contamination or food tampering to either cause harm or for economic benefit. It is difficult to manage the inherent risks of such acts as food terrorists can strike anywhere and can have a range of motives, from being disgruntled employees to individuals with a cause. Food terrorism can be mitigated to an extent with robust, risk-management strategies involving the latest technologies and systems in processing, packaging and traceability.

Industrial Internet of Things and Industry 4.0 are the terms used for the current technology trend in automation and data exchange in manufacturing. While these evolving Industry 4.0 technologies enable an efficient and controlled production environment, they also create cyber-risks with Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) systems. These systems can become a target for hackers who wish to access them to obtain valuable intellectual property, tamper with the food for monetary gain, or harm the corporate image of the manufacturer[15].

Wine and sugar don't mix

Yealands Estate Wines was the first company to be charged under the Wine Act 2003 after admitting to intentionally adding sugar to wine after fermentation, a process that breaches the European Union's winemaking requirements. Furthermore, Yealands made false statements and material omissions in wine records to try cover their tracks. Yealands was fined $400,000 and three individuals were each fined between $30,000 and $35,000[14].

Financial and international implications

Conducting a food recall is an expensive exercise. The direct costs of getting the product off the shelf, as well as any costs arising from loss of sales, replacements, and possible government sanctions all quickly add up. This is especially impactful for SMEs, who, unlike their larger competitors, may not have the cashflow or experience to sustain unforeseen losses.

Conducting an international recall can have an even bigger impact on a company and leave it liable to international regulations and lawsuits. New Zealand is unique with ACC, which provides universal, no-fault accidental injury cover, but in many countries these costs are left to the companies themselves.

Strawberries and needles

In September 2018, some Australian strawberries were found to have needles intentionally inserted into them, with 186 separate incidences reported and a loss to growers of AU$12 million. Copy-cat cases in New Zealand then followed, with needles found in both strawberries and capsicums.

Facebook posts and other social media comments carried conflicting messages that left consumers confused and searching for information. Although the Queensland Strawberry Growers Association blamed social media for making the crisis worse, their inability to react immediately and communicate in a timely fashion was more likely the issue[18].

1080 Blackmailer

During November 2014, Jeremy Kerr, owner of pest-control poison manufacturer Feratox, posted baby milk formula mixed with highly concentrated poison to Fonterra and Federated Farmers with a letter demanding the country stop using 1080 or he would release poisoned infant milk powder to the public[16].
This act was a result of Kerr's financial motivation to ban 1080 in New Zealand with a hope that it could increase the sale of Feratox in New Zealand. But instead, it cost the country millions in investigation and additional measures. The loss to the country could have been in the billions if not for the speedy response by the dairy co-op and government authorities[16].

Scale of loss to the country[17]

Fonterra	$20m+
Other dairy companies	$47,000 - $1.9m
Federated Farmers	$100,000+
Foodstuffs and Progressive Enterprises	$1.7m
MPI	$4.2m
Police	$5m
Total	**$37m+**

Regulatory Framework

The Ministry for Primary Industries (MPI) and Food Standards Australia New Zealand (FSANZ) are the main authorities responsible for food legislation in New Zealand[19]. FSANZ is responsible for developing and managing food standards for both Australia and New Zealand, however it's New Zealand role is limited to developing standards around the use of ingredients, additives, composition of food and labelling requirements. MPI enforces these standards and conducts New Zealand food recalls.

The legislation that enforces food safety in New Zealand includes the Food Act 2014, the Wine Act 2003, Agricultural Compounds and Veterinary Medicines Act 1997, and the Animal Products Act 1999. The Food Act 2014 aims to ensure all food sold to consumers is safe and suitable. A key feature of the Act is the concept that "one size does not fit all" and a sliding scale is used to categorise risk and determine an appropriate risk programme[20].

The Food Act 2014 focuses on outcomes rather than prescriptive measures. Verifiers are asked to use their professional judgement as higher-risk businesses are required to meet higher standards. Food-safety officers now have new infringement tools to deal with minor infringements and in some cases have the power to close or restrict the use of a manufacturing location if food safety is compromised. They have the power to apply significant penalties and initiate a prosecution for more serious food offences. The Food Act 2014 can impose company fines of up to $500,000 and individual directors can be fined up to $100,000 with up to five years' imprisonment. Since the Act came into force in March 2016, we have now seen the first fine imposed under it on 31 January 2019[21] (see Hellers case study on page 10).

The recent Fonterra Whey Protein Concentrate inquiry established that New Zealand's food-safety regulatory model is one of the best in the world and in line with international principles. While this may be a positive outcome from the inquiry, concerns were raised regarding a lack of traceability and a lack of information from professional service firms within the industry.

In 2018, the Food Safety Law Reform Act brought consistency to the whole food-safety system, with amendments aligning many processes and systems. This new law strengthens food-safety responses through better traceability and improved information accessibility, and gives the Government more power to set recall requirements.

China has proposed an export certification requirement for all foods and beverages it imports. These proposed requirements would involve significant compliance requirements for New Zealand exporters and manufacturers.

A tale of two prosecutions

Sizzler sausages

In September 2017, three children became sick after consuming cheese-flavoured Sizzlers, with one needing hospital treatment for severe anaphylaxis. In January 2019, New Zealand meat company Hellers was fined $40,000 and ordered to pay $5,000 to each of the children.

MPI determined that staff at Hellers' Wiri factory didn't follow correct procedures which resulted in Cheese Sizzlers being labelled as Original Sizzlers. Hellers pled guilty to one charge of failing to ensure its food was safe and suitable. The fine was the first time the penalties under the new Food Act 2014 had been imposed[23].

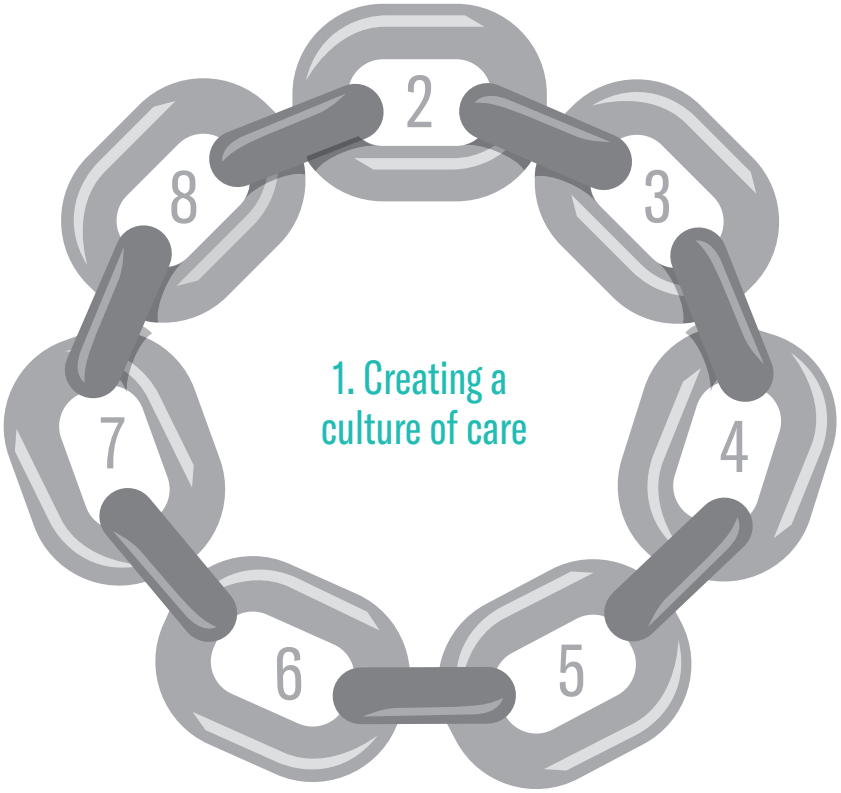
Salad sauces

A contract sauce manufacturer recalled five batches of its salad sauces after identifying traces of sesame - an ingredient not listed on the product and a known allergen. After consulting with MPI, the manufacturer instigated an immediate recall.

An MPI investigation into the cause identified trace elements in a vat from a different sauce that had been previously processed. The manufacturer was spared from further investigation because of its effective risk management, but was required to implement stricter cleaning procedures and positive release mechanisms after lab testing. The company was also issued a warning of escalated enforcement for any future incidents.

Risk management strategies and mitigation tools

The following links of risk management all contribute to creating a culture of care and should provide food manufacturers with a comprehensive risk-mitigation strategy to ensure all of their food products are safe.



2. Training
3. Quality management systems and processes
4. Verification procedures
5. Contract liability mitigation
6. Traceability
7. Recall plan
8. Crisis management

1. Creating a culture of care

Creating a culture of care is fundamental for any business let alone one in the food manufacturing industry. A business may invest heavily in technology and quality management systems to mitigate food-safety risk, but all of these investments amount to nothing if employees are not engaged with a positive mindset. Unless employees are comfortable taking responsibility for a duty of care with their products to consumers, and ultimately the business, mistakes will always be made. While technologies and systems have evolved to minimise errors, humans haven't evolved to the same level, and are ultimately the weakest link in any business risk-management programme.

There is no science behind creating a culture of care, but the basics of creating one should start with the company values. These should be aligned with policies at board level and communicated and effectively demonstrated to the rest of the organisation. Business purpose, values and ethos should be the foundation for developing all systems, training and processes. Research indicates that employees are most disengaged by passive leadership. It's not so much what leaders do that frustrates staff; it's what leaders don't do. It is inaction rather than action that angers them most.

If a business can demonstrate that it cares about staff through establishing Good Operating Practices, training, fair management, incentives (monetary and non-monetary) and a healthy, happy workplace environment, staff members will have a better sense of loyalty and job satisfaction.

Indicators of a culture of care:

- Employees feel well-trained and are able to discuss any potential issues with management

- High internal confidence that food safety is an important part of the business

- High reporting rate of potential hazards

- Low hazard impact outcomes

2. Training

A quality training system is essential for any food manufacturing business to equip employees with all the necessary tools to implement and monitor strict procedures and controls to prevent a food-safety incident.

New Zealand has a favourable learning environment that encourages career development within the food manufacturing sector. A national certification programme is in place that enables employees to achieve a New Zealand Certificate.

Industry Training Organisations (ITOs) contribute to the programme through financial support and specialist consultants, thereby helping companies to achieve a tailored, sustainable and cost-effective training programme for their staff. For those without a formal qualification, a New Zealand Certificate can be a considerable personal achievement, giving a morale boost to both the individual and to the group.

Training programmes should accommodate the changing dynamic of the New Zealand workforce, with particular consideration given to literacy, numeracy and English as a second language. The Survey of Adults (2014) found that those working in the primary industries, including manufacturing and food services, were at Level 2 for literacy, and lower still for numeracy[24].

The International Adult Literacy Survey identifies five levels of literacy and numeracy, with Level 3 considered as "a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society." By adopting a Workplace Literacy and Numeracy (WLN) programme, workplaces reported that the higher levels of literacy and numeracy lead to better performance and safer workplaces, with staff who are happier, more engaged and more capable.

3. Quality management systems and processes

Food manufacturers in New Zealand are required to operate under the appropriate risk-based measure under the Food Act or Animal Products Act, e.g. National Programme, Food Control Plan (FCP) or a Risk Management Programme (RMP), depending on the type of food product that is manufactured. Generally, if a business is exporting animal products and official assurance is required, an RMP is needed[24]. New Zealand Food Safety provides an interactive web tool to identify the type of plan or programme a manufacturer needs to operate under – www.foodsafety.govt.nz/myfoodrules.

Documented Good Operating Practices (GOP) and applying a Hazard Analysis Critical Control Point system (HACCP) or an equivalent risk assessment is required if you operate under FCP or RMP. While GOP generally addresses the environment and the facilities where the manufacturing takes place, including hygiene and training, HACCP addresses the product and the related process-specific hazards. Both these practices complement each other and form the most important foundation for all food-safety and quality-management programmes.

With recent events such as the Australian strawberry contamination, quality-management systems also need to address risks beyond a HACCP programme, such as identifying threats and vulnerabilities from intentional sabotage.

The effectiveness of training - expert view

A well-constructed training programme will identify that a student is competent at a particular point in time. A sustainable programme, however, is preferable as it assesses ongoing progress. Onsite assessment also allows for capable staff members to "demonstrate skills" rather than to "demonstrate understanding" (requiring literacy, numeracy or ESOL).

Increasingly, online training provides a convenient solution to training needs, though a combination of live and online training ensures the best results. Online training including the use of Artificial Intelligence/Augmented Reality can provide technical solutions but may lack interaction. A training environment that provides two-way traffic – such as live training where questions can be answered and concerns resolved – is recommended.

NIGEL BURROWS
& STEPHANIE CARBONE,
NSF INTERNATIONAL

Approach to food fraud prevention

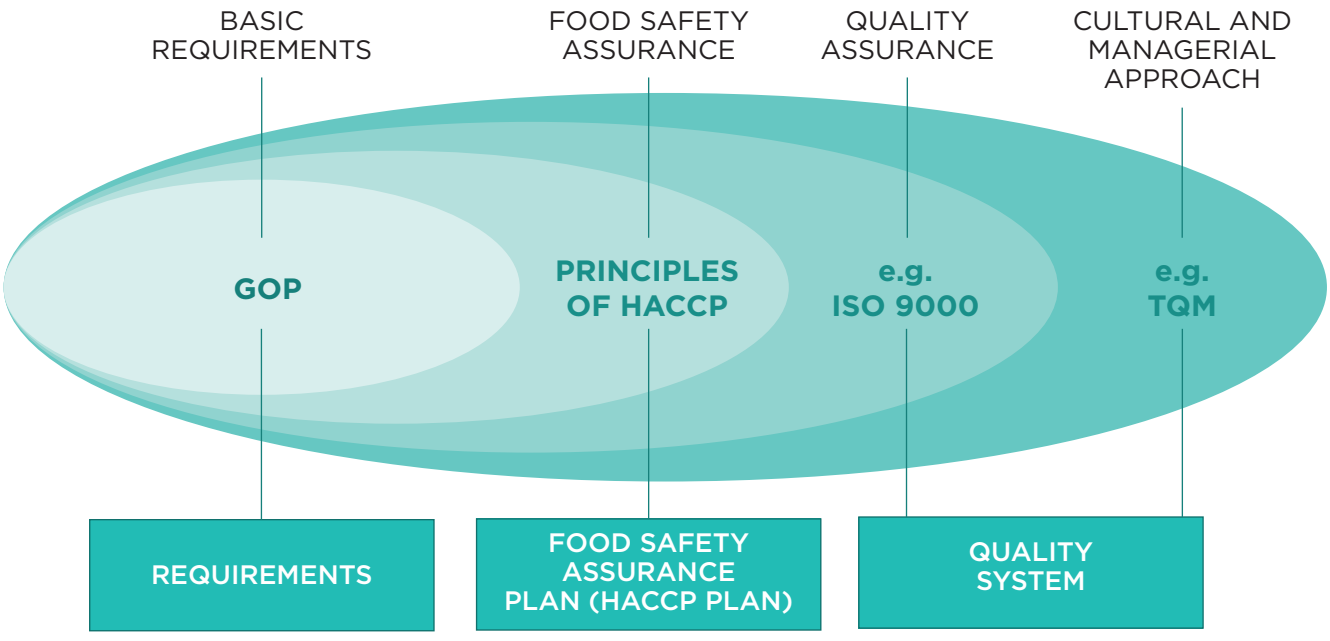
International standards

The FCP and RMP programmes (encompassing GOP and HACCP) are a great foundation, but their remit is limited to safety assurance. Food manufacturers and food processors need to think beyond FCP and RMP if they are to achieve consistent outcomes, better efficiency and expand into new markets.

ISO 9001 is one of the most recognised and accepted quality management systems across the globe. It is designed to address complex global supply-chain risks and improve customer retention with consistency across the different divisions (within a business), with greater emphasis on leadership engagement. While ISO 9001 is not a mandatory requirement for food manufacturers under New Zealand legislation, it is often included as a contractual requirement when dealing with international and larger customers. Some larger firms go a step further and create their own assurance programmes and require their suppliers to comply with them. For example, Woolworths requires all their suppliers to comply with Woolworths' Supplier Excellence Programme[28].

A Total Quality Management (TQM) programme sits above a Quality Management System and addresses the continuous improvement of internal practices across organisations at both management and employee levels. Aligning these practices with company goals goes a long way to gaining customer loyalty. While all these programmes tackle risks and efficiencies at different levels, the core values they are based on are the customer satisfaction outcomes.

With recent events such as the Australian strawberry contamination, quality-management systems need to address the risks beyond a HACCP programme, like identifying threats and vulnerabilities from intentional sabotage.



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS - PREREQUISITES FOR HACCP[29]

4. Verification procedures

The verification process is intended to confirm that food is produced in a consistent and controlled manner, within an ideal hygiene environment, which has been designed to minimise hazards. Under the Food Act 2014, FCPs and National Programmes must be verified by a recognised verifier. Recognised agencies include local councils and third party verification organisations (depending on their scope of recognition).

Food businesses are responsible for arranging verifications with their contracted agencies. Recognised agencies also have a responsibility to complete the verifications. The Food Act also requires food businesses to 'self-check' i.e. conduct monitoring, internal audits and other activities.

Possible verification outcomes

	Performing	A business meets the applicable requirements of the Act.
	Conforming	Meets the applicable requirements, but an activity found may lead to a future non-conforming grade.
	Non-conforming	The applicable requirements are not fully met, but they will not effect the safety or suitability of the food (such as a failure in record-keeping).
	Non-compliant	The applicable requirements of the Act are not met and will lead to the safety and/or suitability of the food being threatened if not fixed.
	Critically Non-compliant	The applicable requirements of the Act are not met, and food safety and/or suitability of the food is threatened immediately.

The following verification topics are mandatory for every verification:

- Registration/Scope of Operations
- Improvement and corrective actions
- Complaints and recalls
- History of non-compliance
- Managing unsafe/unsuitable food

Plus the 'top five' food safety factors for each sector (outlined on the MPI website). The overall verification outcome may be acceptable or unacceptable depending on findings identified during verification (see topics above).

What does a verification involve?

A reality check to look at food production and safe food practices is a critical part of verification. This may include talking to staff as well as owners, managers or supervisors. A verification also includes a review of any procedures or records (where available) and checking that procedures are properly documented.

As a minimum, the verifier has to verify the mandatory topics and the top five. However, if deficiencies are identified, then the verifier has the right to dig deeper and/or add topics.

An acceptable verification outcome does not guarantee 100% compliance. A verification is a sampling exercise and reflects what was observed and noted on the day.

5. Contract liability mitigation

Reading the fine print of any contract is an essential part of any risk-mitigation strategy. While having a capable lawyer can mitigate many of these risks, it is up to the business to be aware of the implications of the terms of the contract prior to signing the agreement. It's also important to have a clear contracting process so that people in the organisation know who has the authority to enter into contracts or to agree any amendments to them. It is worth noting that any contractual obligations that go beyond standard legal obligations are excluded under most insurance policies, so any additional liabilities under a contract (such as liquidated damages) will likely be a direct cost to the business which cannot be recovered. Where insurance does apply, it is unlikely to provide comprehensive cover.

Any contractual obligations that go beyond standard legal obligations are excluded under most insurance policies, so any additional liabilities under a contract will likely be a direct cost to the business which cannot be recovered.

In an ideal world, businesses would want to avoid any onerous liability conditions where suppliers impose "all care/no responsibility" provisions. In reality, however, businesses are sometimes required to accept suppliers' onerous conditions as a commercial decision. Therefore, when entering a contract, it is essential that businesses clearly evaluate whether the increased obligations and associated risks are unavoidable and, if so, whether they are acceptable.

While some insurance solutions can address this, businesses must think about the risks beyond the remit of insurance and consider the risk to the business itself, and more importantly, factor in the hard-to-insure intangibles risks such as Intellectual Property (IP) theft, brand damage, and the value they carry.

Key accountabilities in a contract that need to be addressed include:

Regulatory requirements: Who takes on responsibility when the product does not meet legal requirements?

Product liability: Where do the responsibilities and costs lie when the product is not up to standard?

Product recall: Where do the responsibilities and costs lie for the recall process?

Limitations on liability: If there is a limitation-of-liability clause, is it acceptable? If you are in a chain of contracts, do the limitations in each of the contracts match up?

Intellectual Property: Provisions that protect the customer against third-party IP claims, including determination as to who is liable or responsible if a third party's trademark is inadvertently breached.

Termination obligation: What happens when the contract is terminated?

6. Traceability

The concept of traceability is based around the ability to track backwards and forwards one step at a time through any part of the supply chain. This allows for the recall corrective action (Food Recall) to occur quickly and effectively. It also reduces food fraud by giving companies and consumers greater transparency around exactly where their products have come from in the supply chain.

Trends point to an increased use of blockchain technology, wearable technology and augmented reality in the food manufacturing sector. It is critical, however, to ensure any new technology meshes seamlessly with existing hardware and software.

Blockchain technology

Blockchain is a new form of technology that uses a decentralised system to guarantee the transaction of information, making it ideal for traceability. Blockchain technology provides food manufacturers with certain advantages, such as faster transaction speed, reduced cost and better security.

Embracing Blockchain

NZ manuka honey and kiwifruit are among the popular products that are prone to counterfeiting in Asian countries. One New Zealand manufacturer is going to great lengths to fight counterfeiting through blockchain. Jars of manuka honey are marked with invisible ink and tracked with blockchain to keep fake products off the market.

Midland Apiaries has also introduced consumer security and counterfeit features to its Puriti Manuka honey products including invisible ink making it more difficult to be counterfeited[32].

These systems and plans should be periodically tested to ensure that they are effective and remove the unsafe product from consumers and/or the distribution chain.

Fonterra's traceability programme

Fonterra has adopted blockchain technology as a pilot for Alibaba's Food Trust Framework. This allows consumers in the Chinese market to gain access to product information by scanning the QR code on the product and finding out specific details of such product including the batch number, the region the milk was sourced from, and the Certificate of Inspection[30].

7. Recall plan

Even with the best risk and quality-management programmes, a food-safety recall may occur as a result of circumstances outside a manufacturer's control. It is critical that food manufacturers are prepared for such events and plan ahead. Food Recall is the identification and removal of food from the supply chain and is the ultimate response to a food-safety incident. Recalls can be made voluntarily by the business or required by MPI, using powers under legislation to protect public health. Any recall should follow a prepared recall plan, a written document that contains the relevant information necessary for the recall event to go as smoothly as possible. MPI offers a great resource for how to prepare this document.

It is crucial that the recall plan is reviewed, tested and simulated periodically. While the document is a good place to start, the crucial part is the performance of this plan in practical scenarios. This can be tested by conducting simulation exercises or mock recall exercises. Food consulting and risk-management companies can assist with such exercises.

8. Crisis management

Businesses and other organisations invariably face risk. Things can go wrong in any facet of operations, though good management and processes reduce the risks, often to almost nil.

Businesses strike issues, problems or mishaps that need to be sorted out and generally are, without too much detrimental effect on the business. At the other end of the scale, businesses can encounter a major issue of crisis proportions, the difference between the two – an issue and a crisis – being that the former usually doesn't threaten the existence of the business or harm people or plant, whereas the latter might.

In the Food Manufacturing world, an issue might be a recall incident involving a recall with no major injuries or fatalities; a crisis would be a product contamination that led to fatal consumption, especially by one or more vulnerable people[33].

Crisis prevention versus crisis management

An incident may have a significant negative impact on a business or industry without necessarily becoming a "crisis". In this instance, preventing reputational damage should be the priority rather than "managing a crisis" that has yet to occur. The biggest misunderstanding of crisis management is that a crisis is inevitable. A crisis is usually caused by, or made significantly worse by, a company's own actions.

Short-term costs following an incident are generally reimbursed (e.g. product recall costs are usually met through insurance cover). However, it is the ongoing management of critical long-term relationships with key stakeholders, primarily consumers, that is essential to a company's recovery from an incident.

When companies make statements in relation to incidents and product recalls, they often fail to address consumer concerns and expectations. Some companies fail to realise that showing compassion retains a consumer relationship, whereas issuing facts does not. In a safety-related incident, this can generate outrage and make a situation worse.

STEVE HATHER, THE RECALL INSTITUTE

Conflict and confusion create a crisis. Only clarity and credibility will keep you out of one.

Baby powder and talc

Studies have linked talc with ovarian cancer for over 40 years. Johnson & Johnson are currently defending their iconic talc-based baby powder from thousands of legal suits from women that have contracted ovarian cancer. Johnson & Johnson maintain there is no causal link. This has become a crisis of Johnson & Johnson's own doing, with millions spent on the legal defence as well as significant management time and lost sales. Arguably the only winners are competitors with non-talc-based powders, and the legal fraternity[34].

Issues Management vs Crisis Management

Prudent businesses understand the scope of both recall management and crises that could potentially beset their organisation and map out the steps that can (and should) be taken to try to avoid them, and respond to them if they do arise. That calls for both recall plans and a Crisis Management Plan, which should include a comprehensive Business Continuity Plan and robust planning for communications with all those affected by the crisis including employees, consumers, trading customers, suppliers, regulators and, where warranted, the public at large.

For an issue arising with a food product, the first step generally contemplated is a recall, and it's wise to act quickly to curtail the possible damage from a bad product being in circulation. But at stake here is not simply consumer health through consumption of a faulty product; the business's reputation is also going to be on the line. How a company responds to the incident (or crisis) has huge significance for its reputation and ability to continue operating and selling its products.

NIKKI WRIGHT,
WRIGHT COMMUNICATIONS

Steps to reputational recovery

1. Correct the issue quickly

The most crucial step of reputational recovery is solving the issue as soon as possible. Regardless of the seriousness of the issue, if the consequences are drawn-out and linger in the public eye, the recovery becomes more difficult. While this must be done as soon as possible, clear communication to customers and others affected is essential to retain a positive relationship. Consumers appreciate being informed, so if this is done well, the company has the opportunity to show both empathy and consideration.

2. Short-term reputational recovery through damage control

Damage control has the potential to demonstrate empathy for affected consumers and the wider public. A marketing campaign can be highly effective, especially via social media, but businesses must tread carefully. If done poorly, damage control can escalate feelings of resentment.

3. Long-term recovery

Any long-term reputation recovery is ultimately built on the back of reliable, quality products and targeted marketing campaigns.

Precautionary principle approach

Studies have shown that the cost of a crisis has doubled since 2000, with social media a key reason behind this. Social media has meant that negative discussions about product brands and companies can spread faster and more broadly than ever. Conflict and confusion creates and exaggerates a crisis, and social media only accelerates this.

Many consumers receive their news via social media, including traditional media sources posting online. When major incidents occur, consumers are likely to turn to online sources to get answers to their questions and concerns. When they don't find those answers on company, retailer or regulator websites, it establishes a void that others are happy to fill, potentially with misinformation and speculation.

Traditional media strategies provide one-way communication where the company can only hope the media publish their side of the story. Social media, however, allows a company to have complete control over messaging and provides a platform to engage and respond publicly to consumer concerns. Engaging with consumers as quickly as possible when an incident has occurred allows the opportunity to present accurate information. By responding in a timely manner, companies can display their empathy with those affected and show they are doing their best to remedy the situation. With continuous engagement, consumers are less likely to seek information elsewhere. Involvement with a social media company can help in the deployment and management of social media resources but a response strategy and key messages should be developed by the business.

STEVE HATHER, THE RECALL INSTITUTE

Four P's for reputational recovery

Perspective: Have the right attitude towards consumers, recalls and crisis management. Focus on the long-term interests of the business and key relationships with stakeholders.

Plan: A well-tested, effective and simple recovery plan allows each employee to understand their role in the event of a crisis and help keep the team on track.

Practice: Perform simulation exercises to test the quality of your response plan. Understanding how your team will react in a potential crisis will instill confidence throughout your business.

People: A culture of care creates the ground-work for a successful business. Key leadership skills, group problem-solving, strategy development and well-trained employees will be key factors in the event of a crisis.

STEVE HATHER, THE RECALL INSTITUTE

Dark days for chocolate

During February 2019 in New Zealand, 12 different chocolate companies conducted recalls of various dark, or dairy-free-related products. A manufacturer based in Singapore who supplied all of these companies had failed to completely flush the processing line which was previously used to make milk chocolate. This led to the dark chocolate that was manufactured containing elevated levels of dairy products. The companies were forced to recall their products because of the lack of labelling of the allergen, milk. There were a further seven recalls during late February and early March, but there was no evidence suggesting the ingredients were sourced from the same supplier. With dark chocolate being the common ingredient in all these recalls, however, there is a strong link.

While these businesses may have been careful with their own risk-management strategies, the trust they put in their supplier led to a massive nationwide recall of products. What's more, the contracts they had in place stated their product "may contain traces of milk", meaning that the supplier is unlikely to be held liable for a contamination at their end. While this emphasises the importance of independent testing, this also illustrates the importance of insurance, for when the unexpected occurs.

Manufacturing liability insurance coverage

A common misconception with a General Liability policy is that product recalls are covered. While there is very limited cover extended under a General Liability policy to cover expenses associated with a recall, this doesn't provide a comprehensive solution for a food recall.

Stand-alone comprehensive insurance solutions have been available for more than three decades through limited insurance markets, predominantly targeting larger manufacturers. This is mainly driven by the insurers not being able to achieve economy of scale and the SME businesses not being able to afford the premium levels as a result. This is an aggravating trend across several other specialist and niche insurance segments given the relatively small size of the New Zealand market.

At Delta Insurance, we believe SMEs need better access to these specialist coverages as they are more vulnerable and susceptible to the cashflow issues that can lead to large financial problems, and in some cases, bankruptcy. Delta Insurance has developed a packaged solution that encompasses several niche products. Many insurers do not offer a specific food manufacturing product; however, the key differences separating it from General Liability policies gives a greater width of coverage to avoid unnecessary costs.

Delta's Manufacturing Liability policy is an extension of our General Liability policy, and provides cover in four additional areas:

Recall: The food recall is triggered if there is damage or risk of damage to health or third-party property. Key to this is the damage element; for example, if a product is contaminated in a way that it is not a risk to consumers' health or the product is not right aesthetically, the policy will not be triggered.

The recall policy will also trigger under the specific packaging defect extension. Under most product-recall policies, a packaging defect such as mislabelling is only covered if there is a risk of harm to consumers, but Delta's policy provides cover for unintentional errors.

Errors and omissions: This section covers financial losses incurred by customers and third parties as a result of design, formulation or manufacturing of a product. While the recall section compensates the manufacturer for replacement of unsafe products, the errors and omissions section covers the economic losses to third parties. The main difference between this and General Liability policy is the trigger is not tied to a personal injury or property damage.

The cost of a crisis

A study in 2000 conducted by the University of Melbourne showed the average cost of a corporate crisis is AU$10 million, and 25% of crises cost over $100 million. By comparison, a 2018 study found that the cost of a crisis has doubled since then, primarily because of social media activity. Larger companies can withstand the costs of a crisis as they often have a portfolio of brands (so can rely on other products to continue business), as well as the resources needed to develop crisis management programmes. Some smaller companies, particularly those with a single product or who are reliant on a few key contracts, may struggle to survive the costs of a recall.

Environmental damage: This provides cover for clean-up costs and compensation to third parties arising out of a pollution event, including slow, long-term gradual pollution incidents.

Crisis management: In the event of a crisis where a company faces adverse media coverage, the crisis management section provides assistance to mitigate negative publicity, such as hiring public relations consultants, meeting medical expenses, or providing counselling services for individuals affected by the crisis.

	ENVIRONMENTAL LIABILITY	PROPERTY INSURANCE	PROFESSIONAL INDEMNITY	GENERAL LIABILITY	PRODUCT RECALL INSURANCE	MANUFACTURING LIABILITY
Business interruption	🟡	🟡	🔴	🔴	🟡	🟢
Civil claim - gradual pollution damages	🟡	🔴	🟡	🔴	🔴	🟢
On-site pollution clean-up costs	🟡	🟡	🔴	🔴	🔴	🟢
Pure financial loss to third party	🔴	🔴	🟡	🔴	🔴	🟢
Product replacement	🔴	🔴	🔴	🔴	🟢	🟢
Packaging defect	🔴	🔴	🔴	🔴	🟡	🟢
Malicious product tamper	🔴	🔴	🔴	🔴	🟢	🟢
Crisis management costs	🔴	🔴	🔴	🔴	🟡	🟢
Product recall costs	🔴	🔴	🔴	🟡	🟢	🟢

🟢 Cover provided 🟡 Coverage possible 🔴 No coverage

What isn't covered?

There are notable common exclusions that manufacturers should be aware of when adopting policies, so that they are not disadvantaged if these exclusions occur. These can include:

- natural deterioration
- known defects
- reputation damage
- intentional food fraud by the manufacturer
- counterfeiting
- non-conforming products that don't meet the requirements unless they are unsafe for human consumption
- false claims (e.g. "free-range" or "halal", when they are not).

Case Study Scenarios

The following are several scenarios where a manufacturing firm may face liability, with the likely insurance response in the wake of such an event.

Scenario 1: Product recall

A boutique cheese manufacturer packed their cheese destined for overseas markets with dates longer than the intended shelf life. The error was picked up when the shipments reached the Chinese ports. The products were recalled as they posed a potential danger if consumed after the end of the shelf life.

The product recall section covered the costs associated with recall and replacement of the cheese products. Total value of the cheese replaced was $80,000 and the cost associated with the recall was another $30,000.

Scenario 2: Product recall-specific packaging defect extension

A chilled-food manufacturer used the wrong label for one of its ready-to-eat soup products. This mislabelling did not pose any danger to consumers but had the wrong ingredients and incorrect nutrition information on the label as a result.

Generally, product recall policies will not respond as there is no foreseeable harm or threat to human health. But the packaging defect extension under Delta's Manufacturing Liability will respond to such scenarios and covers the costs involved in recalling and replacing the product or re-labelling it.

Scenario 3: Manufacturer's errors and omissions

A contract manufacturer's packaging unit was faulty and caused the packaging to be defective which resulted in food spoilage with the customer losing revenue as a result.

The product recall section responded with recall and replacement of the product but their customer sued them for loss of revenue and expenses. This is covered under the errors and omissions section.

Scenario 4: Pollution damage

A local authority investigated the contamination of a stream next to an abattoir and found that the contamination was the result of a long-term failure of containment of waste-water within the abattoir.

The abattoir was ordered to compensate for the clean-up costs incurred by the local authority. In addition, the nearby businesses sued the abattoir for direct losses and expenses for additional disposal costs during the clean-up. Both claims were covered by the Pollution Damage section.

Scenario 5: Consequential loss

During a WorkSafe NZ investigation of a food manufacturer following a workplace accident, the company was unable to operate for a week.

The reparations and defence costs were paid by the company's Statutory Liability policy; the company, however, incurred a week of lost revenue. They claimed this amount on the Consequential Loss section of the policy.

Conclusion

The future for the food manufacturing industry in New Zealand is bright, with high growth internationally and locally. However, manufacturers must prioritise food safety to maintain the country's image of high-quality and safe food. It's more important than ever for companies to prevent and mitigate damage arising from food-safety incidents. Increased awareness of new allergens and allergen-prone people makes it even more challenging for the food industry to manage these risks.

As an industry with a diverse range of products and unique risks, only robust manufacturing processes and procedures can generally prevent these incidents from occurring. While evolving information and food technology is a boon to the food industry, it increases the risk of cyber-based threats. The above combined with globalisation poses new challenges to the food manufacturing industry. While outsourcing of manufacturing supports an efficient global supply chain, it also poses potential continuity, quality, regulatory and contractual issues.

The foundation of any risk-management strategy should start with addressing the human element by nurturing a culture of care within an organisation. This should start by aligning a company's purpose, values and policies, which should be adopted at the board level and cascaded down throughout the organisation. Quality management systems combined with verification procedures should be an integral part of a food manufacturer's risk-management strategy, but can only be effective if a culture of care exists. Another essential link is managing contractual liability and having effective verification procedures. While all the above are vital risk-prevention strategies, business continuity strategies such as recall-plans and crisis management plans are equally important.

The foundation of any risk management strategy should start with addressing the human element by nurturing a culture of care within an organisation.

A recall plan is essential, but such a plan needs to be regularly reviewed and tested via simulation exercises to test its effectiveness. An effective product-recall plan combined with robust crisis management planning can minimise damage to a manufacturer's brand and reputation.

Delta has developed a specific liability wording for the food and beverage manufacturing sector which carries some unique coverage sections which are often not addressed under standard liability policies. Food manufacturers carry the risk of food-safety incidents, associated recall losses and reputational damage which can be costly and can have a serious impact on manufacturing, especially for SMEs. Delta's Food Manufacturing Liability policy carries unique coverage sections, including product recall and financial losses to third parties, and can cover the costs associated with crisis management to help mitigate negative publicity.

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* **Disclaimer**

Delta Insurance has found this information and drawn these conclusions based on the information that was readily available through online resources. The information is presented as accurately as possible and has been based on an internal analysis that may differ from actual statistics. For instance, there was some assumptions made about the type of recall, such as where a recall may have been instigated due to a false claim of being halal. This has been designated as a regulatory recall as opposed to a contamination.

Notes

About

Delta Insurance

In 2014 Delta Insurance set up shop in Auckland wanting to do things a little differently than the status quo – introduce new products for niche markets, be transparent, embrace technology, embrace change in general, and deliver exceptional service.

Five years on, with a team of 35, a Singapore office, 10,000 customers and sights set on Asia Pacific, the Delta team maintain the same philosophy they established from the start.

Our Philosophy

Trust and integrity - Trust in our company and the integrity with which we operate is non-negotiable. We are firm believers in transparency and we deal honestly and openly with our brokers and their customers. We break through complexity so that our policies are easy to understand and our company is easy to transact with. Our reputation is our lifeblood.

Committed relationships - We are proud of our long standing relationships with our brokers and customers. They can rely on us to deliver what we promise – claims response, service and timeliness.

A performance culture - We're a dynamic business and act quickly. In our service business, it is the quality of our people that creates the value.

Fresh thinking - We draw on our depth and breadth of experience to offer perspectives that add value and encourage an ideas culture. We're not a business that accepts the status quo. We embrace technology and look for better way to do things.

Inspiring capability - Our specialist knowledge helps brokers help their customers and this in turn strengthens our relationships with them.

Big thanks to

Jack Donovan - about the author

Jack worked with Delta underwriters, risk management consulting firms and vendors to write this whitepaper as part of our 2018 summer internship programme. Jack recently completed his Bachelor of Commerce majoring in Accounting and Commercial Law at Victoria University and is now working full time at Delta.

Steve Hather, The Recall Institute

The Recall Institute assists companies with the processes and skills to prevent incidents and product recalls through planning, online and onsite training and response practice in a safe and realistic environment to improve skills and build confidence.

Nigel Burrows, Regional Manager, Stephanie Carbone, Auditing and Consultancy Manager, NSF International

NSF International combines the strength of a multinational food safety business with local knowledge. NSF Burwater works to achieve additional business benefits for their clients whether in Food-related Consulting, Training, Auditing (covert and overt) as well as the implementation of technologies in these fields throughout Australasia.

Stephen Kay, Sedgwick New Zealand Limited

Sedgwick New Zealand is part of the largest claims management group in the world, bringing together robust global capabilities and local expertise. With more than 220 colleagues in 23 locations across the country, Sedgwick assists insurers, brokers, lawyers and corporate risk managers with property and liability loss adjusting, marine surveying, forensic accounting, third party administration and building consultancy.

Nikki Wright, Wright Communications

Wright Communications is an Auckland-based PR agency covering the full gamut of corporate and marketing communications including reputation management through issues and crisis communications planning. The agency also specialises in sustainability reporting and storytelling and is an active member of the Sustainable Business Council.

Our brokers and clients

Most of all thanks to you guys. Without you, it would be a tough gig.

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