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Food & Beverage Industry:
Risk trends from a casualty risk insurance perspective

11 July 2023

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Opening

Jack See, Head Malaysia

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Global Trends in the Food & Beverage Sector

Daniel Andris, Head Risk Engineering Services Casualty

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Agenda

Top Emerging Risk !

PFAS in the F&B industry

What are PFAS?
Regulation worldwide
insurance Concerns
What can clients do?

NEW Trend in F&B!

Lab-grown Meat

What is Lab-grown Meat?
Regulation worldwide?
What are the risks?

PFAS in the F&B Industry

01

What are PFAS?

- PFAS (Per- and polyfluoroalkyl substances) - is an umbrella term to indicate up to 10,000 compounds
- PFAS have very different chemical and physical properties (e.g., water, oil and dirt repellent, temperature resistant, film-forming, high chemical stability)
- All PFAS are either persistent themselves or degrade to other persistent PFAS
- PFAS remain in environment for decades to centuries -> **"Forever chemicals"**

Very high Persistency

Used everywhere

Where are PFAS used?

- Firefighting foams
- Textiles
- Food contact materials (incl. packaging)
- Metal plating/products
- Ski wax
- Transport
- Applications for fluorinated gases
- Industrial processes

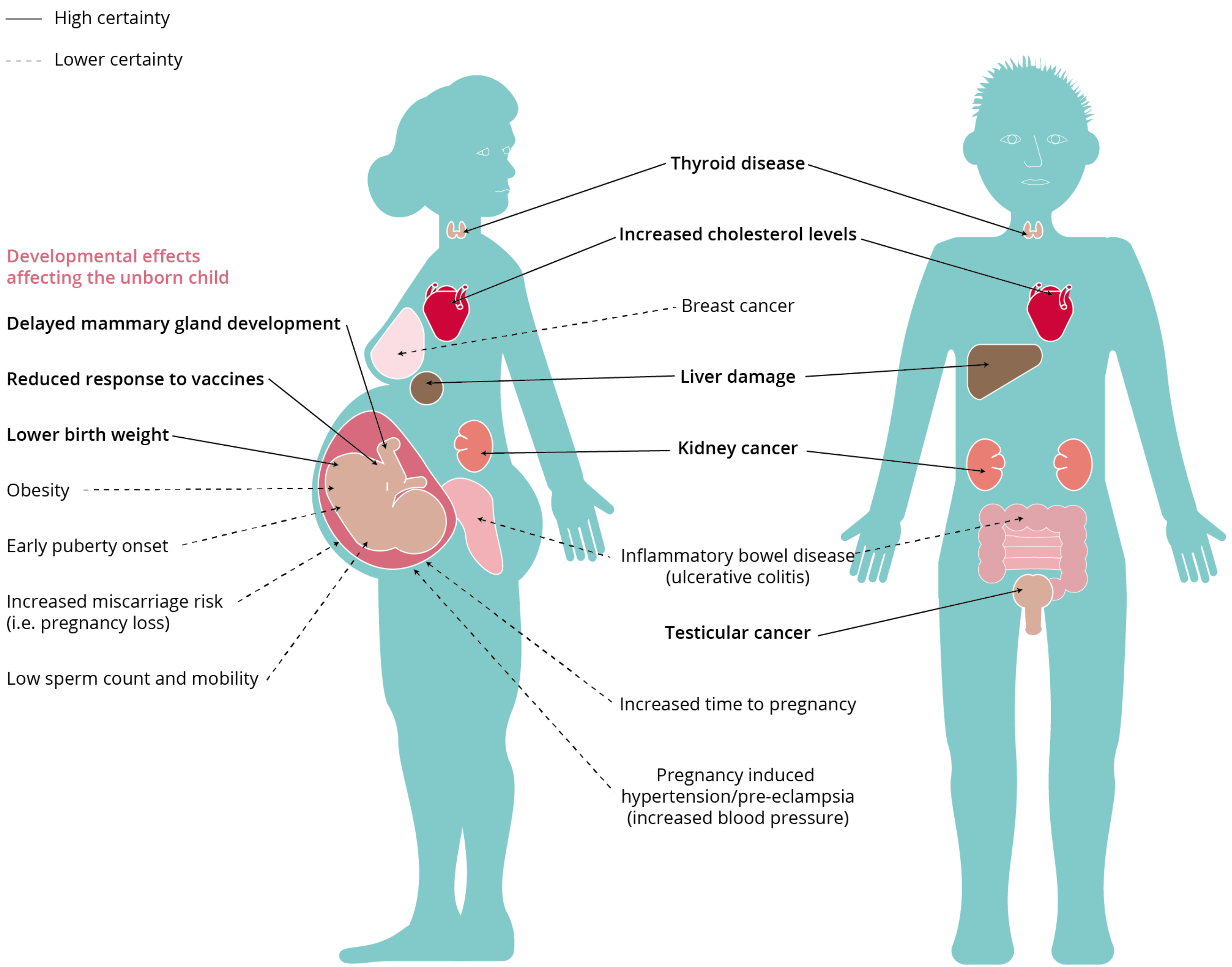
- Non-stick cookware: PFAS may be used as a coating to make cookware non-stick
- Food processing equipment: Gaskets, O-Rings, and other parts
- Paper/paperboard food packaging: PFAS may be used as grease-proofing agents (e.g., in fast-food wrappers, microwave popcorn bags)

Why concerned ...?

- are everywhere
- don´t break down in soil or water
- found in many industries and products
- present serious challenge to manufacturers and further users
- have created a new wave of global regulations
- EDC (Endocrine Disrupting Chemicals)
- Litigations start affecting non-PFAS manufacturers (e.g., F&B industry)

Alleged Human Health Effects

- ❖ Developmental effects on unborn child
- ❖ Liver damage
- ❖ Kidney cancer
- ❖ Thyroid disease
- ❖ Other Cancer



https://www.eea.europa.eu/themes/human/chemicals/emerging-chemical-risks-in-europe/Effectsofexposureinhumanhealthfinal.png

Regulatory situation worldwide

Comparison

Regulatory landscape globally is evolving **at different speed and with diverging legislation**. This is a concern for companies to always ensure compliance with it and in all jurisdictions where they are active

USA

- Lack of binding federal action
- Several states enacted individual PFAS restrictions and bans (as well on food packaging)

➢ **Patchwork of regulations and increased compliance costs** for retailers, manufacturers, and distributors.

Asia

- Food packaging regulations across South and Southeast Asia pertain mainly to plastics.
- PFAS regulations are still in early stages of development

➢ PFAS regulatory maturity across Asian countries is **extremely heterogenous**.

Europe

- EU proposed an EU wide restriction for PFAS on February 7th, 2023
- Roughly **10,000 PFAS shall be banned as group**
- Compared to the past the EU takes the approach to restrict PFAS as a group instead one-by-one single substance.

➢ **Broadest restriction proposed in history by a regulatory authority!**

PFAS Litigations and Recalls in the F&B industry
.... it starts in the US

Wrongful Advertisement claims are the main type of personal injury lawsuits currently observed

November 2022

A class action lawsuit has been filed against Kraft Heinz, alleging that the company's "all natural" Capri Sun Strawberry Kiwi juice drink contains PFAS chemicals. The water used is contaminated with PFAS which was not labelled.

Source: https://www.caprisun.com/product/capri-sun-juice-drink/capri-sun-strawberry-kiwi-flavored-juice-drink-blend-10-ct-box-6-fl-oz-pouches-00087684000991

January 2023

Coca-Cola and Simply Orange Juice Company are facing a class-action lawsuit in the U.S. over claims that the drink contains toxic PFAS chemicals. The suit alleges that the company deceived its customers by presenting the product as "all-natural" and "healthy" despite being contaminated with toxic PFAS.

Source: https://www.sportskeeda.com/pop-culture/all-mass-produced-stuff-poison-nowadays-simply-orange-juice-pfas-lawsuit-explained

July 2022

Bumble Bee Foods LLC is recalling smoked clams after FDA testing found detectable levels of PFAS chemicals in samplings of the imported product.

Source: https://www.foodsafetynews.com/2022/07/fda-testing-finds-detectable-levels-of-pfas-prompting-recall-of-smoked-clams/

Personal injury lawsuits are following the environmental pollution lawsuits!

Insurance concerns – Examples of scenarios

GL – Product Recall

- If non-compliance with limits allowed in food

<u>Example:</u>

FDA seafood recalls

GL – Impaired Product

Bodily injury (BI) due to food

- contaminated with PFAS (e.g., freshwater fish) or
- contaminated from migrating PFAS in food packaging

BI potential difficult to prove but PFAS medical monitoring costs claims is an avenue that is pursued currently in the US

GL - Wrongful Advertisement

- Wrongful advertisement of the products
- Misleading statements made on the products
- Greenwashing

potentially leading to personal injury

<u>Examples:</u>

Capri Sun, Coca Cola

D&O

- Loss of shareholder value due to mismanagement of the transition to PFAS free food packaging material

* subject to terms & conditions of the policy

What insureds should know?

Some considerations:

- Understand where you have PFAS in your materials (including equipment) and what they are used for
- Ensure food products and processes conform to PFAS regulations
- Know your supplier and their products (supplier management including audits and follow-up)
- Include PFAS in your hazard assessment program
- Consider recourse rights against suppliers -> Enforce it with appropriate contracts
- Research for PFAS alternatives in food packaging
- Do not overstate “sustainability”, “organic” and the like features of your food /food packaging

Lab-grown meat

An insurance perspective

02

Source: https://starthaiup.com/whats-happening/lab-grown-meat/

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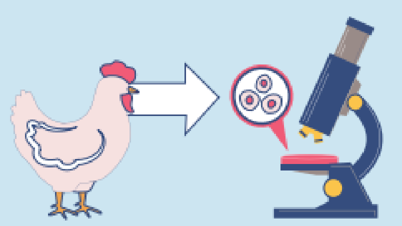
What is Lab-grown Meat?

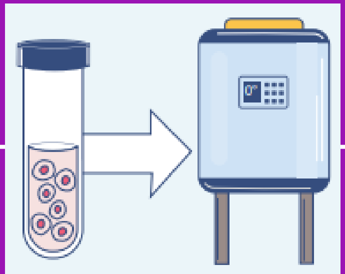
- Lab-grown meat is also **called cultivated or cell-based meat**
- Lab-grown meat is therefore **developed from animal cell culture** (it is *not an imitation of meat* made with other ingredients, like plant-based burgers that are made from plant-based proteins)
- The **basis are stem cells** taken from a live animal
- These stem cells can differentiate into **meat, fat and connective tissue**

Lab-grown meat – Production Process

1 Cell Collection

A sample of stem cells are taken from a live animal



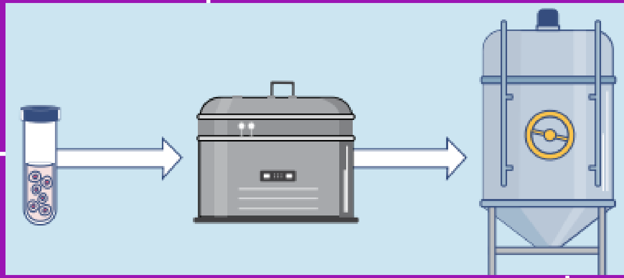


2 Cell Line and Cell Bank

Cells are grown to make a "bank" of cells that are frozen and stored for later use

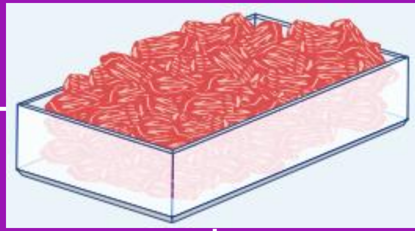
3 Transfer and Growth

Cells from the cell bank are placed in tightly controlled environments that support growth and multiplication by supplying nutrients and other factors.



4 Differentiation

After the cells have multiplied, the environment is changed to allow the cells to assume muscle-specific characteristics



5 Harvest

The material is harvested and further processed

https://www.fda.gov/media/163026/download/

Lab-grown Meat – Regulation and Market

- As a **«novel food»**, lab-grown meat must be **approved by national food safety authorities**
- **Singapore is the first country** to have approved the commercial sale of lab-grown meat, in the form of chicken nuggets and chicken breast
- In the US, two companies have completed the premarket consultations with the FDA for lab-grown meat (cultured chicken).
- EFSA has so far received no scientific dossiers from companies producing cell-based foods, as they considers the process to be too rigorous and lengthy compared to other countries' regulatory frameworks.

Lab-grown Meat – Change in Risk profile?

Pro’s:

- No need for raising and slaughtering large numbers of animals (**Animal Welfare**)
- No risks that stem from animal husbandry (e.g., no risk of salmonella contamination or E. coli (usually comes from the gut of livestock) -> **Improved food safety?**
- **Sustainable production** of proteins for the growing world population (less animals, no huge areas to cultivate animal feed, less use of pesticides)

Con’s:

- Not yet entirely slaughter-free. The process still relies on stem cells obtained from live animal
- There is still the risk of microbial and chemical contamination at different production stages (eg. during biotech production phase and after harvesting).
- It is not clear whether mass-production of meat in the lab is more sustainable (eg. increased need of energy)

Lab-grown Meat – Insurance perspective

Some examples:

- Potential for **unknown 'new' health risks** (eg. limited nutritional value leads to bodily injury)
- Misleading statements that lab-grown meat product is 'biologically equivalent to traditional meat' (**wrongful advertisement** of the products)
- Lab-grown meat products have near-neutral pH and high protein and moisture content, making them susceptible to microbial growth
- Formulation, shelf-life and process validation studies may still be necessary to ensure food safety
- Poor storage and/or delivery practices allows food spoilage and contamination

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Summary

PFAS in the F&B industry

- High regulatory burden
- Quickly changing regulatory environment
- Rise in litigations in certain regions
- F&B industry is affected by contaminated food products and PFAS-containing food contact materials

Lab-grown Meat

- Regulation for approval of lab-grown meat is in development
- Manufacturing processes and related risks are more like biotech drugs
- Market experience is still lacking
- Potential new unknown risks

→ These new – and emerging risks do not alter current main F&B risk/ loss drivers, like contamination, etc.

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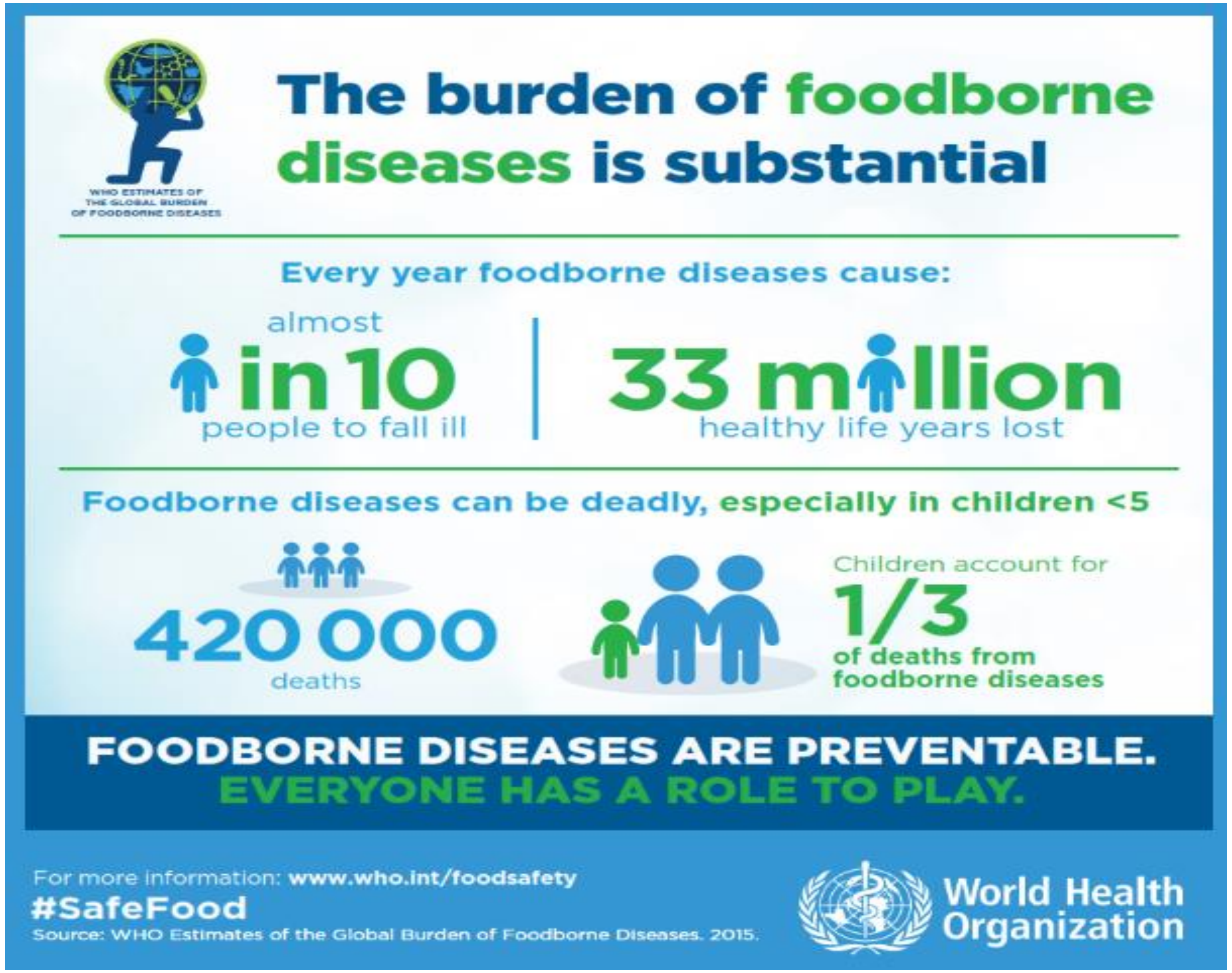
Claims

Terence Chew-Lau, Claims Expert

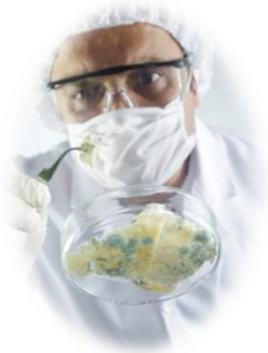
Food Safety – A Global Concern



Source: http://www.who.int/news-room/fact-sheets/detail/food-safety

By **2050**, we will need to **increase** food production by **70%**

Main Risks in the Food Industry (PL & Recall)



Microbiological contamination
E.g. bacteria, viruses, yeasts, parasites

Chemical contamination and residues
E.g. residues of pesticides, cleaning agents, packaging

Physical contamination
E.g. glass or metal fragments, plastic

Labelling issues
E.g. undeclared allergens, misleading health claims, adverse advertising

Processing defects
E.g. during process or storage ingredient mix-up, violation of regulations

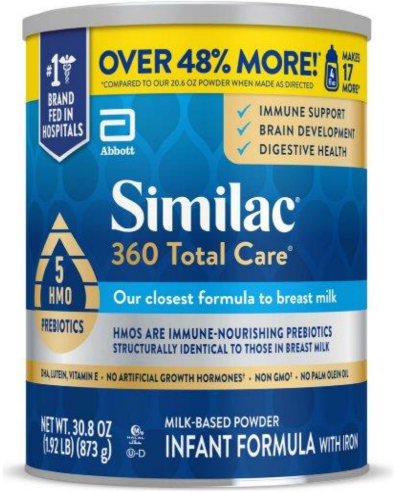
Common Causes of a Food & Beverage Recall

- In the US, Allergen contamination has overtaken Microbiological contamination as the number 1 cause of food recalls.
- Allergen contamination related to cross-contamination and mis-labelling.
- Common allergens are milk, eggs, peanuts, shellfish, wheat and soybeans.

Contaminant type	2023 position	2022 position	Change from 2022
Allergen	1	2	↑
Microbiology	2	1	↓
Foreign body	3	3	↔
Unsanitary conditions	4	12	↑
Processing error	5	4	↓

Source: RQA Group Product Recall Bulletin Q1 April 2023

Recent Food Poisoning & Recall cases globally



Abbot Laboratories' Infant Formula

1. USA: Recall of Similac, Alimentum and EleCare formulas in Feb 2022, after some babies were hospitalized and 2 died. Coronobacter Sakazakii were found on numerous surfaces in Abott's Michigan plant. The plant was shut down for 5 months, resulting in nation wide shortage of infant formula. Cost of Recall: $100M; Loss of revenue: expected to be around $325M.
https://www.reuters.com/business/healthcare-pharmaceuticals/what-happened-with-abbott-baby-formula-that-worsened-us-shortage-2022-05-16/

2. USA: 157 law suits against Abbot & Mead Johnson to date over failure to warn premature babies fed Similac and Enfamil may develop necrotizing enterocolitis (NEC). NEC is a serious gastrointestinal condition that causes intestinal tissue death and may be fatal.
https://www.drugwatch.com/baby-formula/lawsuits/

Recent Food Poisoning & Recall cases globally

Kinder Surprise

1. Recall of 'Kinder Surprise' Easter eggs and other Kinder chocolate products made by Ferrero in April 2022; At least 450 mostly young children fell ill in 10 countries after eating the chocolate eggs; Recall of the chocolate eggs from 55 countries. Salmonella found in butter milk tank in Ferrero's Belgium factory, resulting in the shutdown of the factory. Loss to Ferrero : US$100M+
https://news.un.org/en/story/2022/04/1117072

2. 1st July 2023- Ferrero have informed Belgium authorities it has found Salmonella in the same Belgium factory. Production lines stopped pending further investigations.
https://www.foodsafetynews.com/2023/07/ferrero-finds-salmonella-again-at-belgian-factory/

Recent Food & Beverage Recall Incidents in South East Asia

Apr 2023: Chemical contamination

Ah Lai White Noodles and Indomie: Special chicken flavour : contain Ethylene Oxide- recalled in Taiwan

https://www.channelnewsasia.com/asia/malaysia-instant-noodle-ah-lai-white-curry-health-ministry-carcinogenic-food-3444926

Oct 2022: Microbiological Contamination

Recall of eggs in Singapore from Teo Seng Farm due to Salmonella

https://www.thesundaily.my/local/teo-seng-suspends-layer-farm-1-in-relation-to-salmonella-enteritidis-XB9993707

Sep 2022 : Undeclared Allergen

Fukutoku Seika Soft Cream Wafers recalled in Sep 2022 due to undeclared allergens of egg white and wheat flour

https://www.straitstimes.com/singapore/health/wafers-two-sauces-being-recalled-after-sfa-finds-undeclared-allergens-in-them

Dec 2019 : Packaging defect

Exploding Huy Fong Sriracha Hot chilli Sauce bottles on opening due to lactic acid build up

https://www.straitstimes.com/singapore/popular-huy-fong-sriracha-hot-chilli-sauce-recalled-over-concerns-of-bottles-exploding

Feb 2019: Physical contamination

'Singlong" Brand of Peanut Puff. A small fragmented piece of metal found inside the product

https://www.todayonline.com/singapore/ava-suspends-import-singlong-products-after-metal-found-peanut-puff

Emerging Exposures faced by Halal F&B Manufacturers

Non-Halal ingredients contamination

Pork in Cadbury's: Malaysian chocolate recalled after DNA traces found

Hazelnut & roast almond bars positive for pig DNA during testing for non-halal substances

https://www.marketing-interactive.com/cadbury-recalls-two-products

Wrongful labelled as "Halal" certified

Food items were wrongly labelled "halal" certified

Food of Scottish company Punjab Pakora, bore health stamps which certified the products as fit for halal consumption when the ingredients list included things like 'pork blood', 'pork skin' and 'pork stock'.

https://www.mend.org.uk/aldi-apologises-to-muslim-customers-of-wrongly-labelled-halal-products/?mode=grid

Mixing up Halal & non –Halal processes

Neo Group loses Halal certification, must re-apply after April 2016

Failed to segregate Halal from non-Halal food & raw materials during transportation- cross-contamination of equipment and utensils to be avoided.

https://www.businesstimes.com.sg/companies-markets/neo-group-unit-loses-halal-certification-must-re-apply-after-April

Understand the Difference between Product Liability and Product Recall Insurance

	Product Liability	Product Recall
Triggers	An "occurrence" that causes actual bodily injury &/or property damage	Accidental contamination/Mislabelling/Govt order/ malicious tampering of the Product that has resulted or would result in bodily injury or property damage
Covered Losses	Legal liability for bodily injury &/or property damage to third party + insured's costs of defence	• Costs incurred to recall insured's products (including Third Party recall costs) • Additional Costs • Loss of Profits
Examples	• Legal fees spent to defend lawsuits • Hospital bills/ loss of income/pain & suffering of consumers sickened by insured's products • Customer's products damaged or rendered useless by insured's ingredients	• Costs to transport, store, dispose of recalled products • Overtime and temporary staff expenses • Consultancy costs • Replacement Costs
Crisis Management Services	Not provided	Provided

Complimentary Nature of Products Liability & Products Recall Policies

Coconut milk
manufacturer
(Insured)

Swiss chocolate manufacturer (Claimant).
Found milk contaminated with Salmonella
bacteria

- Reimbursed **chocolate manufacturer (Third Party)** for costs of disposal of thousands of pounds of chocolate and their recall costs- covered under Insured's **Products Liability policy**.
- **Insured** also incurred costs in cleaning all machinery in production line and Loss of Profits. No cover under Insured's Products Liability but would be covered under **Product Recall policy**.

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Some of Our Claims Examples

Spoilt Canned Food

- Insured : supplier of canned Tuna and seafood to Customer in Japan, who brands the cans under their own brand.
- Customer's QC testing: raised Histamine levels of over 50 ppm in some samples (going as high as 180 ppm).
- **Raised Histamine level** indicates decomposition of fish- could result in Scombrotoxin Poisoning.
- Contract with Customer- Histamine to be no higher than 50 ppm.

Spoilt Canned Food

The spoilt fish is an 'Accidental Contamination' which results in Bodily Injury or imminent danger of such injury.

We covered the costs and expenses of shipping, storage and disposal costs of the entire batch of affected cans plus costs of replacement with new cans.

Outcome- loss settled at **USD 200,000**.

Packaging - Cans

Circumstances:

- Insured: manufacturer of steel cans used by Third Parties to can sardines.
- Change in process- new, more diluted lacquer to seal welding seams of cans.
- Complaints by sardine manufacturers that cans were rusty; could not sell rusty cans for fear of contamination and damage to reputation;
- Tests indicate contents not affected by rust and still good for consumption.
- 1,600,000+ cans had rusty seams due to dilution of lacquer.
- Outcome: **USD 475,000** paid for cost of removal and disposal of cans.

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Biological Contamination

- Insured : Manufacturer of cakes with worldwide distribution
- Customers complained cakes were contaminated with mould.
- Lab tests confirmed mould would cause poisoning if consumed.
- Recall of all affected products produced by 2 production lines, one of which had wrong oven settings and the other had contamination from oil droppings from a dirty chimney.
- Costs incurred – Transportation, Disposal, Redistribution & Replacement Costs of new product
- **Outcome:** Loss settled at **USD 2.3 million**

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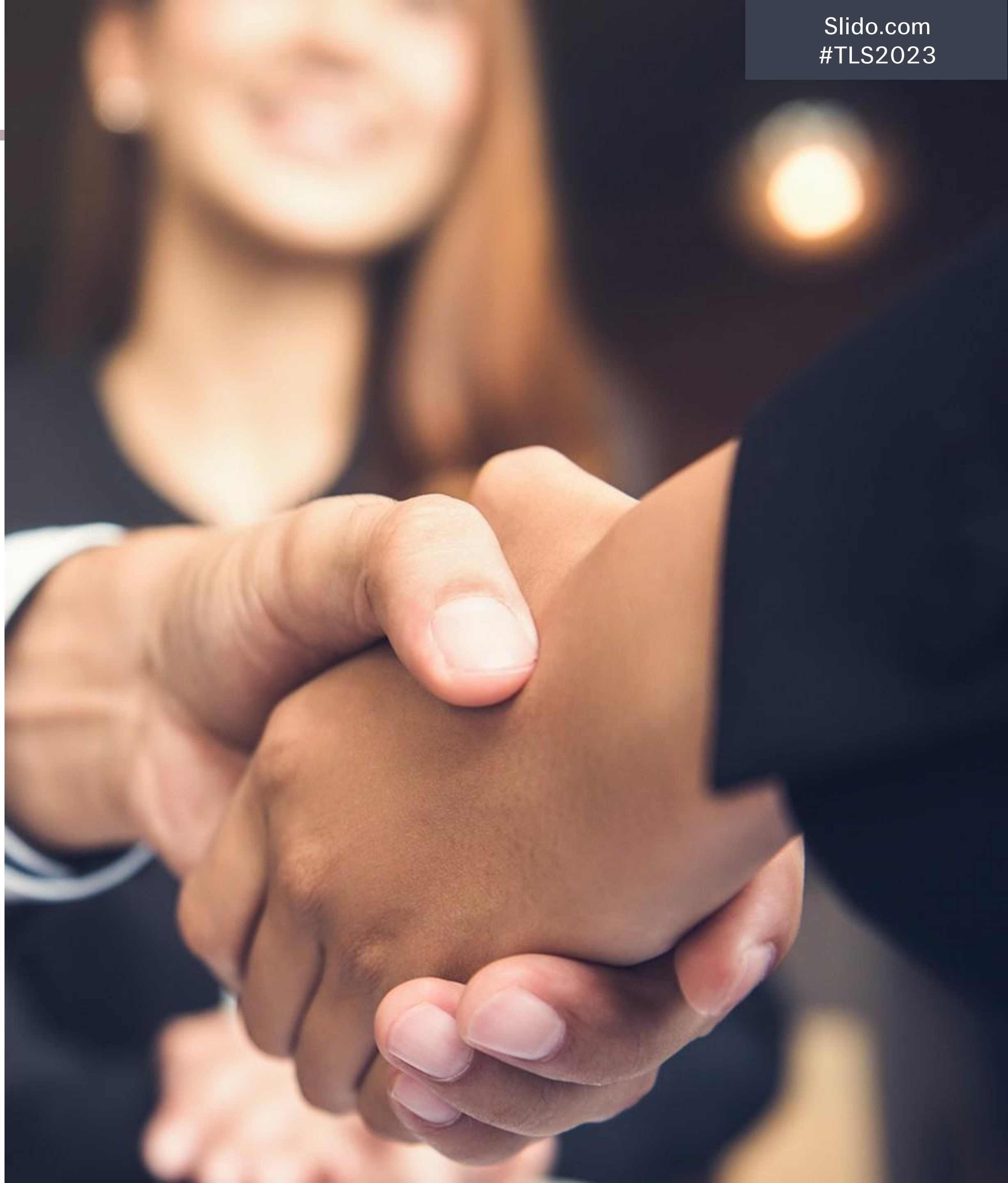
Prospecting - Joint Solution for your F&B clients

- Packaged Solution
  - ✓ 'CGL / Products Liability' with 'CPI/Breach of Halal Certification'
  - ✓ Shared Limit approach

- Benefits
  - ✓ Provide One-stop solution
  - ✓ Avoid grey areas in event of claims
  - ✓ Translate into Premium Savings
  - ✓ Maintain same broad cover under CPI



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Conclusions

- Ingredient suppliers and food manufacturers' Product Liability Claims can attract expensive litigation in multi-jurisdictions.
- Increasing governmental regulations (e.g. recent E.U. and U.S. requirements on labelling, packaging and traceability) make supply of food more onerous.
- Costs of recalls can be expensive.
- Product Recall and Product Liability insurance essential; Coverage and Limits should be adequately assessed.

Q&A

Geoff Yeo, Distribution Manager

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Thank you!

Contact us

Geoff Yeo
Distribution Manager
geoffery_yeo@swissre.com

Yong Jin Jo
Senior Distribution Manager
yongjin_jo@swissre.com

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