

IFST Food Safety Special Interest Group

Allergens and Listeria - Workshop Outputs

27 Nov 19

Background

A collaborative and interactive learning workshop, focusing on key topics identified by the Food Safety Group.

Attendees shared and discussed issues, reviewed resolution experiences, examined indicators that signpost threats and defined plans for preventive risk management to implement in their work places.

Introduction

- Pain points: issues
- Actions to address: corrections
- Indicators of issues
- Plans to deliver prevention

Conclusion

- A review of the outputs from both workshops concluded that many of the same opportunities were reflected with both risks. Although the agent of risk may differ, the causes and reactions to issues are likely to be the same
- Most problems relate to the basics:
 - ✓ Policy, plans, operating standards
 - ✓ Performance: not measuring the right things or driving the right actions
 - ✓ Organisation: competence, capability, understanding & training
 - ✓ Culture: not the biggest issue if the basics are wrong. Addressing the culture of organisations would be like polishing a racing car to make it go faster, when it has two flat tyres, a seized gearbox and no petrol!

SUMMARY OF OUTPUTS FROM THE DAY

Part 1 - Allergens

❖ PAIN POINTS: typical key non-compliance issues

1. Culture

- a. Consciously and knowingly disregarding risks; management overruling
- b. Leadership: poor decision making
- c. Supply chain demand leading to short cuts and increased risk
- d. Resources inadequate to address identified risks
- e. Cost of segregation and avoiding cross contamination

2. Policy

- a. Cleaning failure or ineffective operating procedure
- b. Thresholds: Government has not set clear targets; not set internally
- c. Allergens: 'may contain' labelling declarations: variable and ambiguous; over declaring leads to complacency and gross contamination; different international classifications.
- d. Swabbing protocols targeting incorrect areas, or not fit for purpose
- e. Small batch home kitchens, church fairs, pop-up catering etc. often unaware of risks
- f. Failure to competently risk assess:
 - similar/identical looking products with different allergens
 - number of allergens and different types of format and substrates they present
 - ill-considered allergen transfer risk across production lines
 - allergens have different effects and severity
 - addition of new allergens
 - working with different allergens in confined serving counters
 - multicomponent ingredients and materials with unknown allergen risks
 - food intolerances
 - additives: e.g. Sulphur dioxide as a preservative
 - production schedule changes impacting risk

3. Performance

- a. Poor batch code labelling
- b. Inadequate inventory control: wrong product in wrong packaging
- c. Poor segregation or transport of allergen materials to point of use/preparation area
- d. Mislabelling of product, intermediates and components
- e. Change over process ineffective or not fit for purpose
- f. Contamination of manufactured products in distribution; internet deliveries
- g. Cross contamination via:
 - common utensils, containers, vessels, sieves, filters etc.
 - people: handling allergens (lunch, snacking etc.); clothing from production area
 - multi component raw materials
 - raw materials supply chain natural conflicts
 - food vending machines
 - aerosols created by equipment e.g. milk frothers
 - rework of materials from allergen processes e.g. gluten in beer; prawns in salmon/tuna

4. Organisation

- a. Transient and variable workforce creating cross contamination through lack of understanding
- b. Training multilingual workforce with different cultural allergy reference points
- c. Poor shift, job or task handover
- d. Risk of intervention from non-production team
- e. Failed tests, false negatives, wrong or ineffective testing protocols

5. Consumers

- a. Allergy and intolerance are rapidly increasing
- b. Misalignment between website information and labelling
- c. Misunderstanding labelling
- d. Assumption by recognition: failure to properly check pack labelling and allergen information
- e. Trendy intolerance or a lifestyle choice: part time/convenience

❖ ACTIONS: to address and rectify non-compliances

1. Culture

- a. Retraining employees
- b. Whistle blowing policy: anonymous staff surveys
- c. Line briefings to reinforce allergen risk

2. Policy

- a. Remove products from sale or recall
- b. Alert appropriate bodies e.g. Anaphylaxis Campaign
- c. Better signage in critical areas; use photos of allergen reactions in children
- d. Audit and positive release of plant post cleaning or swabbing
- e. Stop making, handling or serving food with allergens
- f. Register all food production at every level: from church fete to global
- g. Implement CCTV monitoring of people and activities
- h. Engage experts
- i. Allergen testing
- j. Introduction of positive release process
- k. Re audit and act on the results

3. Performance

- a. Colour coding of equipment
- b. Scrap products in supply chain
- c. Repack products/materials
- d. Labelling: relabel; over label; ink jet allergen warning with date code.
- e. Separate preparation areas, counters and servers
- f. Reclean production processes

4. Organisation

- a. Introduce certification from trusted and competent suppliers
- b. Request representative pre-shipment samples
- c. Reject and fine when inbound materials are the confirmed source
- d. Supervisory control: increase approval levels in areas of risk

❖ OPPORTUNITIES: key indicators of issues and exposure

1. Policy/process

- a. No clear allergen policy with lack of resource commitment
- b. Policy, rules, operating standards and implementation misalignment
- c. Sub processes and preparation protocols are long, complicated or difficult
- d. Critical process step missing e.g. inbound material seal, document, specification anomalies or missing

2. Performance

- a. Internal audit; non-conformances
- b. Increased demand and resource capacity issue - staff rushing or under pressure
- c. Product on hold, out of control, increased defects
- d. Consumer or customer feedback; indications of issues

- e. Reduce waste, rework and returns to stock. Optimise the process for efficiency and ease of delivery and operation

3. Organisation

- a. Staff morale, motivation, frustration or confusion
- b. Working space/ area conflict
- c. Inappropriate/ insufficient resources
- d. Poor working area or workplace organisation
- e. Out of place: people, materials, packaging and change parts
- f. Lack of functional understanding of risks and processes:
 - operators, cleaners, food handlers, kitchen staff
 - chefs, food preparation handlers, food servers.
 - suppliers of materials, resources, staff, equipment etc.
- g. Lack of cross functional understanding of allergen risks by:
 - managers and team leaders
 - engineers and contractors
 - new product development (NPD) team
- h. Uncontrolled change to:
 - new materials, suppliers, products, recipe and equipment
 - manufacturing process or preparation
 - temperature, cooling, pressure, proving, dwell time, maturation etc.
 - production/preparation time, materials usage or mass balance change

4. Culture

- a. Decisions made outside policy or process
- b. Risk assessments disregarded
- c. Operating standards flexed to meet demands
- d. Change processes not followed
- e. Encourages random, maverick and 'out of process' behaviours
- f. Compliance to policy can vary depending on the individual or function

❖ PLANS: for preventative risk management

1. Policy

- a. Food safety a Chief Executive/Managing Director's agenda item and primary value
- b. Direct, routine and formal data, information and reporting review at executive level
- c. Continuous review of policies and procedures to reflect data, information, performance and reporting feedback
- d. Risk rate outlet formats against capability to check and evaluate compliance
- e. Engage with industry or professional groups for constant refresh and update
- f. Make the safe process the easiest and quickest possible
- g. Establish clear and technically competent supplier relationships
- h. Multi-functional teams to establish material understandings, risk and sourcing strategy that reflects zero or controlled risk
- i. Materials conflict managed.
- j. Segregation by gravity - location on shelf
- k. Risk assessment
 - material sourcing and supply chain risk
 - allergen substrate, behaviour and ability to travel and incorporate
 - manufacturing or preparation risk identified
 - change management risk
- l. Establish business cost benefits of right first time: zero defects

2. Organisation

- a. Non-functional food safety structure with competence level identified for every role
- b. Culture that rewards and encourages risk identification and removal
- c. Establishment of open, trusted: supply chain relationships and organisational communication routes
- d. Fully accessible and implemented continuous: improvement process and change management process

3. Competence

- a. Identify all roles and establish risk rating and competency requirements
- b. Training appropriate to the role and the risk
- c. Dedicated roles with capability to match need
- d. Engage competent bodies, experts and consultants to ensure internal competency
- e. Retain formal links with networks to ensure knowledge continuously updated

4. Performance

- a. Performance targets set around drivers of risk removal and positive improvement
- b. Business objectives set with food safety targets linked to performance review.
- c. Visual guidelines, labelling, colour coding for equipment
- d. Equipment design to reduce product hang up risk

5. Population/global approach

- a. School curriculum should include food safety
- b. Standard approved testing and protocols required
- c. Global horizon scanning
- d. National/global food adulteration agenda
- e. Uprate food hygiene ratings to include allergens
- f. Share global best practice across food groups
- g. Standardisation of labelling using digital technology.

SUMMARY OF OUTPUTS FROM THE DAY

Part 2 - Listeria

❖ PAIN POINTS: typical key non-compliance issues

1. Culture

- a. Consciously and knowingly disregarding risks; management overruling
- b. Leadership: poor decision making
- c. Supply chain demand leading to short cuts and increased risk
- d. Resources inadequate to address identified risks
- e. Cost of segregation and avoiding cross contamination

2. Policy

- a. Cleaning failure or ineffective operating procedure
- b. Ubiquitous in environment and raw materials
- c. Growth below 5°C
- d. Onset of symptoms can occur after 20 days, or even after 40 or more.
- e. Water is the carrier since enjoys wet environments
- f. Threat from high moisture foods without pH inhibition
- g. Ill considered risk from the frozen/chilled supply chain
- h. High fat foods can be a risk e.g. cheeses
- i. Poor or unclear temperature management controls
- j. Swabbing protocols that target incorrect areas, or not fit for purpose
- k. Small batch home kitchens, church fairs, pop-up catering etc. often unaware of risks
- l. Failure to competently risk assess:
 - poor cleaning and sanitising
 - understanding and risk assessing manufacturing or preparation environments
 - inappropriate or ineffective hygiene barriers encourage Listeria cross contamination
 - ill-considered material transfer risk across product groups
 - new materials or inclusions being added
 - working with different raw materials at confined serving counters
 - production schedule changes impacting risk

3. Performance

- a. Inadequate batch code labelling
- b. Poor inventory, shelf life and temperature control
- c. Insufficient cleaning and sanitising
- d. Lack of sampling of intermediates, products and environment
- e. Poor segregation or transport of materials to point of use/preparation area
- f. Mis-labelling of product, intermediates and components
- g. Change over process, or batch change, ineffective or not fit for purpose
- h. Deterioration of manufactured products in distribution, internet deliveries
- i. Cross contamination via:
 - common utensils, containers, vessels, sieves, filters etc.
 - handlers; clothing from production area
 - multi component raw materials
 - raw material supply chain natural conflicts
 - food vending machines
 - aerosols created by equipment
 - rework of raw materials or components

4. Organisation

- a. Transient and variable workforce creating microbiological cross contamination through lack of understanding
- b. Training multilingual workforce with different cultural hygiene reference points
- c. Poor shift, job or task handover
- d. Risk of intervention from non-production team
- e. Failed tests, false negatives, wrong or ineffective testing protocols

5. Consumers

- a. Lack understanding of Listeria risk, how it can grow and infection capabilities
- b. Incorrect storage, processing and usage

❖ ACTIONS: to address and rectify non-compliances

1. Culture

- a. Retraining employees
- b. Whistle blowing policy: anonymous staff surveys
- c. Line briefings to reinforce Listeria risk

2. Policy

- a. Remove products from sale or recall
- b. Alert appropriate industry bodies e.g. Chilled Food Association
- c. Better signage in critical areas; use photos of immunocompromised consumers
- d. System/data linked temperature monitoring
- e. Audit and positive release of plant post cleaning or swabbing
- f. Stop making, handling or serving food with Listeria risk
- g. Register all food production at every level: from church fete to global
- h. Implement CCTV monitoring of people and activities
- i. Engage experts
- j. Introduction of positive release process
- k. Re-audit and act on the results

3. Performance

- a. Colour coding of equipment
- b. Scrap products in supply chain
- c. Reclean production processes and change chemicals
- d. Distribution and supply chain temperature monitoring
- e. Review of Listeria testing and protocols
- f. Cease using high pressure water to clean as spreads contamination.

4. Organisation

- a. Introduce certification from trusted and competent suppliers
- b. Request representative pre-shipment samples
- c. Reject and fine when inbound materials are the confirmed source
- d. Supervisory control: increase approval levels in areas of risk

❖ OPPORTUNITIES: key indicators of issues and exposure

1. Policy/process

- a. No clear Listeria/microbiological policy with lack of resource commitment
- b. Policy, rules, operating standards and implementation misalignment
- c. Sub-processes and preparation protocols are long, complicated or difficult
- d. Inadequate resources for manufacturing and fabric maintenance, and improvements

- e. Lack of effective policy for calibration and control of critical recording, measurement, analysis and control equipment
- f. Absent critical process step e.g. inbound material seal; missing document/specification or anomalies

2. Performance

- a. Internal auditing; non-conformances
- b. Increased demand and resource capacity issue - staff rushing or under pressure
- c. Product on hold, out of control, increased defects
- d. Consumer or customer feedback; indications of issues
- e. Reduce waste, rework and returns to stock. Optimise the process for efficiency and ease of delivery and operation
- f. Uncontrolled water in environment
- g. Wet materials, leaks, surfaces, cleaning cloths
- h. Frozen/chiller units which create risks and reduce chilling efficiency

3. Organisation

- a. Staff morale, motivation, frustration or confusion
- b. Working space/area conflict
- c. Inappropriate/insufficient resources
- d. Poor working area or workplace organisation
- e. Out of place: people, materials, packaging, change parts
- f. Lack of functional understanding of risks and processes:
 - operators, cleaners, food handlers, kitchen staff
 - chefs, food preparation handlers, food servers
 - suppliers of materials, resources, staff, equipment etc.
- g. Lack of cross functional understanding of Listeria risks and water by:
 - managers and team leaders
 - engineers and contractors
 - new product development (NPD) team
- h. Uncontrolled change to:
 - new materials, suppliers, products, recipe and equipment
 - manufacturing process or preparation
 - temperature, cooling, pressure, proving, dwell time, maturation etc.
 - production/preparation time; materials usage or mass balance change

4. Culture

- a. Decisions made outside policy or process
- b. Risk assessments disregarded
- c. Operating standards flexed to meet demands
- d. Change processes not followed
- e. Encourages random, maverick and 'out of process' behaviours
- f. Compliance to policy can vary depending on the individual or function

❖ PLANS: for preventative risk management

1. Policy

- a. Food safety a Chief Executive/Managing Director's agenda item and primary value
- b. Direct, routine and formal data, information and reporting review at executive level
- c. Continuous review of policies and procedures to reflect data, information, performance and reporting feedback
- d. Risk rate outlet formats against capability to check and evaluate compliance
- e. Engage with industry or professional groups for constant refresh and update
- f. Make the safe process the easiest and quickest possible
- g. Establish clear and technically competent supplier relationships

- h. Multi-functional teams to establish material understandings, risk and sourcing strategy that reflects zero or controlled risk
- i. Materials conflict managed
- j. Segregation by gravity - location on shelf
- k. Clear policy documents and commitments to risk assessment and resource; controls necessary to manage risks.
- l. Clear understanding and implementation of vectors of transfer: wheels, shoes, hands, condensation drips etc.
- m. Environmental water management policy
- n. Testing and monitoring protocols fit for purpose
- o. Risk Assessment
 - water control, sourcing, sanitisation steps
 - materials sourcing and supply chain risk
 - manufacturing or preparation risk identified
 - change management risk
- p. Use modeling software to predict growth threat in different products as part of risk & threat determination.
- q. Establish business cost benefits of right first time, zero defects

2. Organisation

- a. Non-functional food safety structure with competence level identified for every role
- b. Culture that rewards and encourages risk identification and removal
- c. Establishment of open, trusted supply chain relationships and organisational communication routes
- d. Fully accessible and implemented continuous improvement process and change management process
- e. Understanding of seasonal impact, geography sourcing

3. Competence

- a. Identify all roles and establish risk rating and competency requirements
- b. Training appropriate to the role and the risk
- c. Dedicated roles with capability to match need
- d. Engage competent bodies, experts and consultants to ensure internal competency
- e. Retain formal links with networks to ensure continuous, updated knowledge
- f. Recognise and consider indicator organisms - no Mono findings

4. Performance

- a. Performance targets set around drivers of risk removal and positive improvement
- b. Business objectives set with food safety targets linked to performance review
- c. Visual guidelines, labelling, colour coding for equipment
- d. Equipment design to reduce product hang up risk
- e. Protections in place. Environmental control targets e.g. water, temperature
- f. Effective measurement of cleaning (including deep), and removal of risk
- g. Capture, recording and trending of all critical indicators of good controls and well managed environment, materials, policy implementation and governance

5. Population/global approach

- a. School curriculum should include food safety
- b. Standard approved testing and protocols required
- c. Global horizon scanning
- d. National/global food adulteration agenda
- e. Share global best practice across food groups
- f. Standardisation of labelling using digital technology.
