

# A Vision for Allergen Management Best Practice in the Food Industry

---

FDF ALLERGENS STEERING GROUP

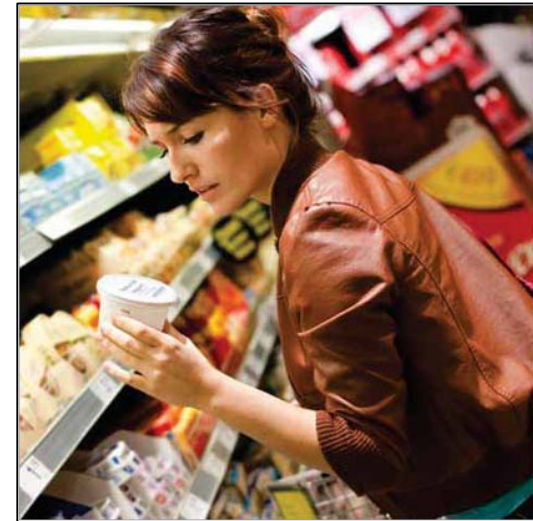
Dr. Rachel Ward, PepsiCo



**PEPSICO**

**F&D EUROPE**

- ④ Food companies continue to face the challenge of consistency in controlling allergens across the food chain and minimising the risk to consumers.
- ④ Consumers confused by inconsistent use of allergen risk communication, sometimes taking risks as a result
- ④ Issues with food recalls due to cross contamination with allergens or incorrect allergen labelling still remain
- ④ Increasing use of (ever lower) analytical limits of detection for risk management decision-making, rather than public health protection criteria



- The Food and Drink Federation represents responsible and reputable food industry in the UK
- FDF takes these challenges seriously, and has an Allergens Steering Group of industry experts who:
  - Review the status of allergen management in food manufacturing
  - Disseminate best practice
  - Propose steps to further develop risk management capability

- UK food industry expects manufacturers to make safe, high quality products which are clearly labelled with allergens in ingredient declarations.
  
- Industry's approach to allergen risk management has been based around classic HACCP and provides significant risk reduction
  - Identification of allergen presence
  - Integration of allergen controls into existing Good Manufacturing Practices, including traceability through the supply chain
  - Segregation of allergenic constituents
  - Application of specific sanitation measures
  - Declaration of the presence of allergenic ingredients on product labels
  
- However, without clear scientific advice as to tolerable thresholds, approach remains **hazard-based** and cannot be **based on the safety risk**

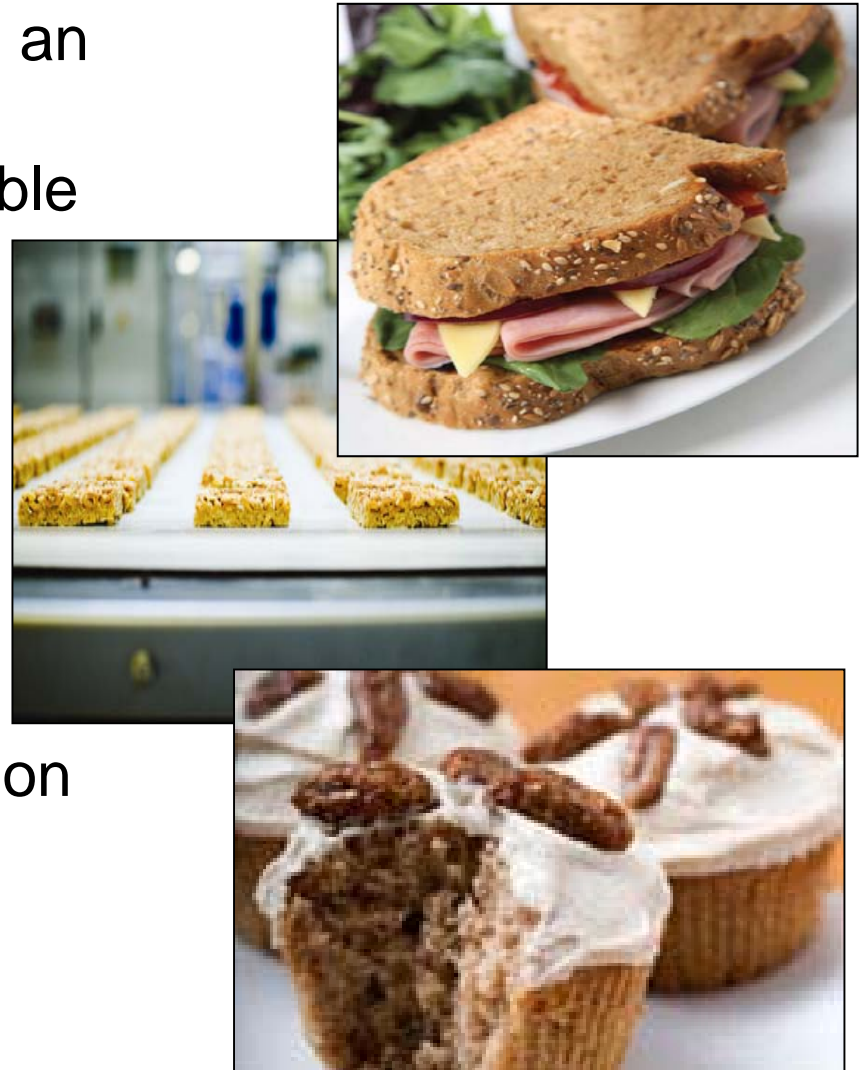
# Vision for Risk-Based Allergen Management

- Evolution from **hazard-based** approach to a **risk-based** approach
- Supply chain consistency in risk assessment and risk communication approaches



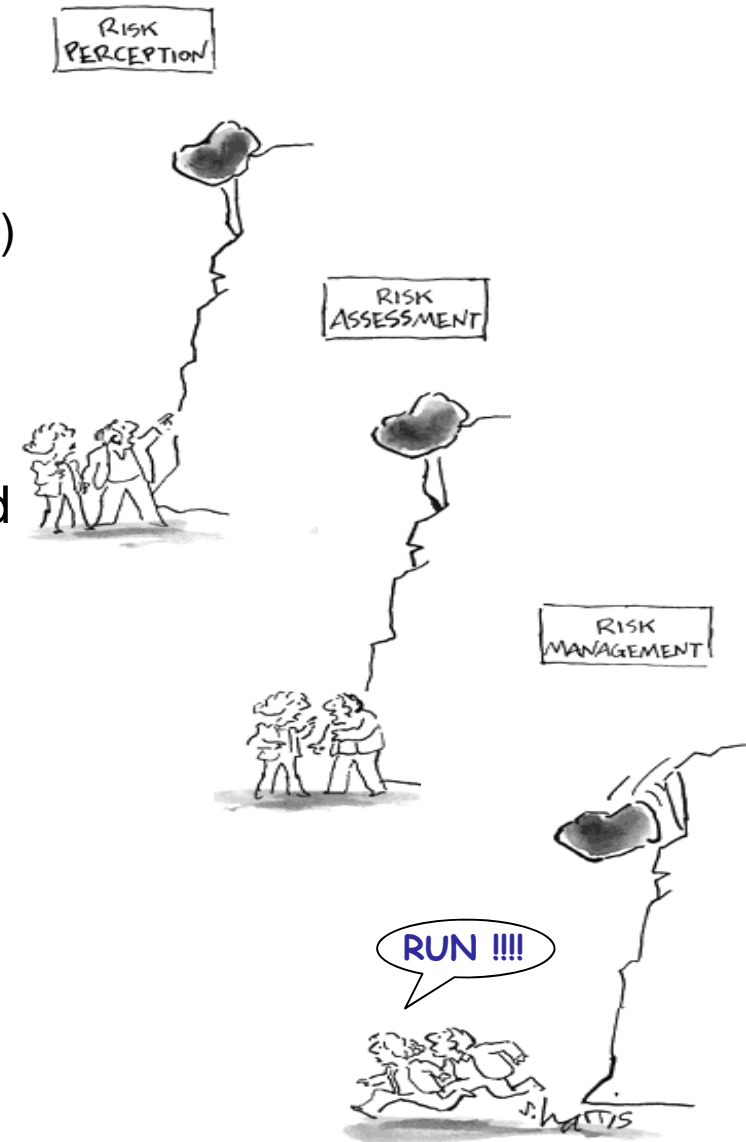
# Allergen Risk Management

- Most common allergenic foods fulfil an important nutritional role in the diet, and it is neither practical nor desirable to eliminate them from products
- Allergens are therefore ubiquitous elements in food manufacturing environments
- Allergen risk management focuses on identification and segregation as opposed to elimination

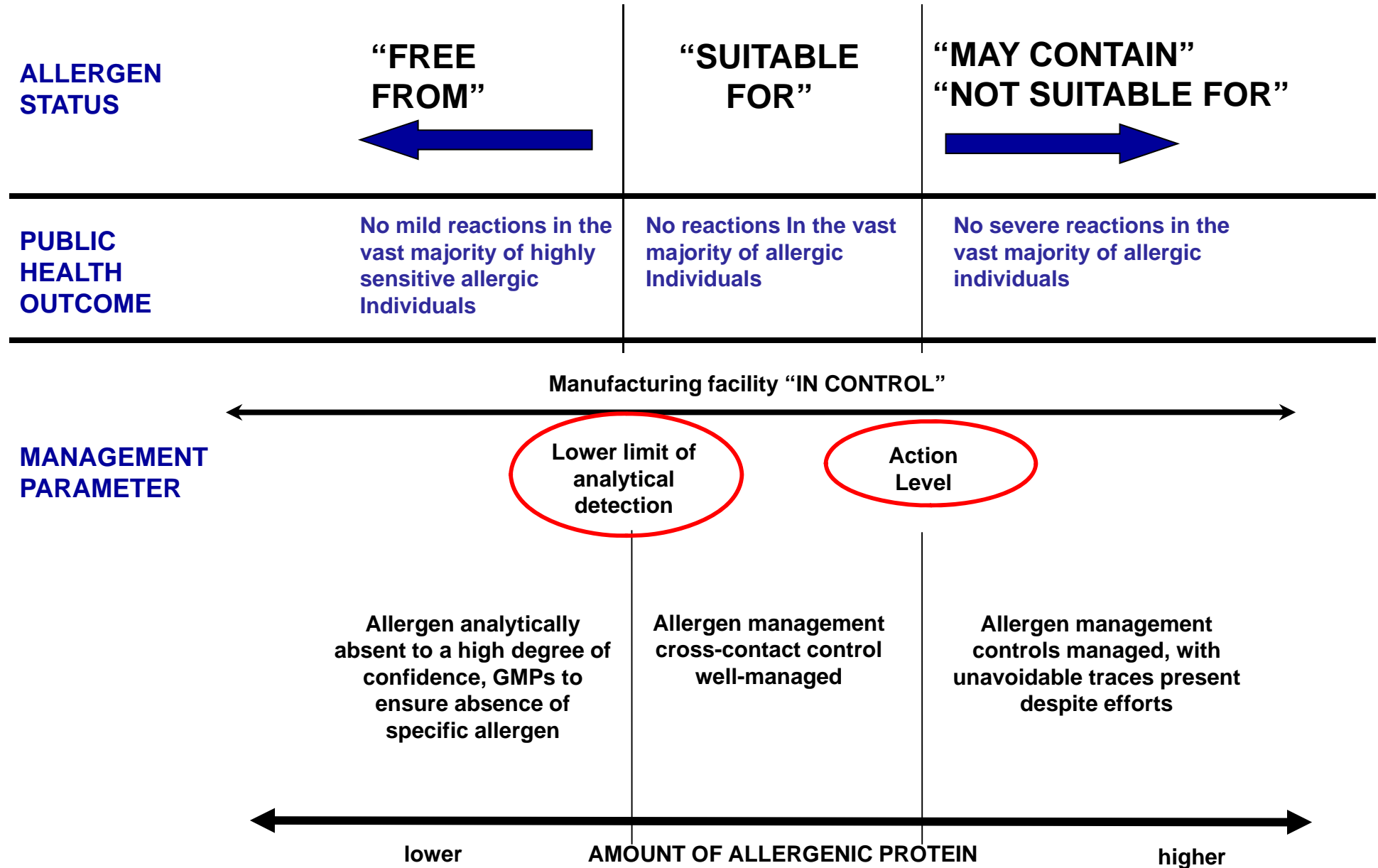


# Allergen Risk Management Key Elements

- ④ Risk assessment – are allergens in food and/or in handling environment?
  - Intentional presence is identified and declared
  - Likelihood and extent of unintentional (cross-contact) presence is assessed
- ④ Risk management – how to control and assure finished product status?
  - Segregation – storage, handling, packing - through cleaning, scheduling and planning
- ④ Risk communication – how to identify product status?
  - Product identification and traceability
  - Clear declarations of allergen presence



# Consistent Allergen Risk Management Approach






# Allergen Risk Category Food Products

- Allergenic foodstuffs are safe for non-allergic consumers.
- Only when product status is accurately described can allergic consumers avoid products effectively

Product Categories	Intentional Presence	Unintentional Presence	Product Status
“Free From”	None and/or Derivative exempted from labelling	Strict control of cross-contact Allergen not analytically detectable	<b>Free from claim permitted</b> No mild reactions in the vast majority of highly sensitive allergic Individuals

# Stakeholders Mutual Responsibilities

- 
- Effective food allergen risk management is a shared chain of responsibility
  - Food industry, regulators, health professionals, and last, but by no means least, allergic patients themselves play a part
  - Industry's responsibilities in allergen risk management include:
    - Consistent risk assessment
    - Capable cross-contact control management programmes
    - Provision of accurate allergen details communication down supply chain, (including on pack labelling) vs. product status
    - Attention to risk advice on pack (especially for allergic consumers)

# Opportunities

## – Industry Supply Chain Improvement

- ② Inconsistencies exist in industry approaches to allergen risk management
  - Often strong focus on a hazard-based approach, with many manufacturers adopting “fail-safe” advisory “may contain” warnings on pack
  - Different manufacturers interpreting supply chain risk differently, as no agreed thresholds.
  - Business-to-business communication varies as manufacturers interpret risk differently
- ② Inconsistent use of phrases to describe product status
  - Current product descriptors appear to imply different levels of risk
  - Growing consumer perception that advisory warnings aim to allow less stringent controls

**Opportunities recognised by industry leaders to align supply chain through awareness building and sharing best practice**

Without thresholds this remains qualitative and subjective

**Reinforcement from all stakeholders  
is necessary to promote best practice**

Promotion of existing best practice tools  
e.g. FDF guides, FSA guidance, Campden BRI guides

# Opportunities

## - Consumer Risk Interpretation

- ④ Industry complying with allergen declarations on pack
  - Consumers do not always understand allergens risk communication
  - Accurate diagnosis of sensitivities will permit optimal dietary choice
  
- ④ Inconsistent use of warnings leads to confusion as to risk status
  - Industry taking hazard-based conservative approach and often over-labelling
  - Consumers unable to assess risk status from types of communication used
  - Consumers may also misinterpret “May contain” labels - consuming the product and failing to react, then wrongly concluding that they are no longer allergic
  
- ④ Consumers at risk of ignoring on pack advisory labels
  - Increasing use of warnings across product types and sectors has considerably lessened impact as a risk reduction tool (Sampson *et al* 2005)

# Opportunities

## - Consumer Risk Interpretation

### **Opportunity to translate risk management capability into consumer protection**

Effective training for consumers on reading labels  
from healthcare professionals


Improved consistency across industry  
as to when to use advisory warnings

- **Risk-based** protective allergen risk management is our mutual aim
- To establish this vision we must take the opportunities to ensure...
  - Consistent risk assessment across supply chain
  - Consistent decision-making for consumer risk communication
  - Stakeholder reinforcement of principles

## **Urgent need now for agreement on management action levels for allergen risk management**

Industry risk management practices are sufficiently capable, but without quantitative action levels cannot be applied consistently

# Vision for Allergen Management Best Practice

 Together we can leverage the full power of industry capability to manage allergens and allow consumer to make the right choices...



Trends in Food Science & Technology 21 (2010) 619–625



## Viewpoint

### A vision for allergen management best practice in the food industry

R. Ward, R. Crevel, I. Bell,  
N. Khandke, C. Ramsay and  
S. Paine\*

Food and Drink Federation Allergens Steering Group,  
6 Catherine Street, London, WC2B 5JJ, UK  
(Tel.: +44 207 420 7138; fax: +44 20 7379 8538;  
e-mail: selina.paine@fdf.org.uk)

Allergenic foods have become recognised as a food safety hazard over the last two decades. Over the same period, knowledge about the biology and clinical characteristics of food allergy has grown, together with information that can be used to assess the risk more accurately. While current practices in allergen management have increased the safety of food products to allergic consumers, the standards applied by different manufacturers remain divergent in the absence of agreed approaches to risk assessment. This has been reflected in a considerable expansion of precautionary labelling and a concomitant reduction in consumers' trust, resulting in risk-taking. To address these issues, this paper advocates a risk management approach based on a common agreed set of principles, leading to consistent and well-understood management action levels across the food industry. The approach also recognises that minimising the risk from allergenic foods is a shared responsibility of all the stakeholders involved. Action levels, by permitting a consistent use of precautionary labelling and clear communication of the allergen status of a food, will play a crucial role in ensuring that risks from allergenic foods are reduced as far as possible.

\* Corresponding author.

0924-6460/\$ - see front matter © 2010 Elsevier Ltd. All rights reserved.  
doi:10.1016/j.tifs.2010.09.004

#### Background

The concept of managing food allergens as a food safety risk emerged in the last decade of the 20th century and has matured considerably over the last 10–15 years. Allergen management has evolved in line with the growing knowledge and understanding of the issue. Initially, little was known about the key determinants of risk; namely how sensitivity and reactivity to allergens varied across the susceptible population, and in response to the dose consumed. Knowledge of the numbers of consumers affected was also almost non-existent, even for the best-studied allergenic foods, such as peanuts.

Industry's approach to date has been based around existing Good Manufacturing Practices (GMPs) assuring segregation of allergenic ingredients and systematic declaration of allergens on labels where mandated. However, more needs to be done to minimise risk and to provide allergic consumers with consistent risk communication and a wide choice of products. Application of allergen management principles is still inconsistent. Individual manufacturers are currently interpreting risk in the supply chain differently, as there are no agreed approaches to perform risk assessment to a common standard.

In the absence of knowledge about the levels of allergens required to provoke adverse reactions, many manufacturers have adopted a purportedly "fail-safe" approach using precautionary labelling. Initially welcomed as helpful by allergic consumers, the increasing and inconsistent use of this type of warning across product types and sectors has considerably lessened its impact as a risk reduction tool (Sampson, Munoz-Furlong, & Sicherer, 2006). This has led to consumers being increasingly frustrated with precautionary labelling and taking risks.

**To improve this situation for consumers, the food industry and the enforcement authorities, a risk management approach based on quantitative assessment of allergen risk has been proposed by the FDF Allergens Steering Group.**

#### FDF Allergens Steering Group

The Food and Drink Federation (FDF) represents the interests of the UK's food and non-alcoholic drinks industry, which is the country's largest manufacturing sector. Its membership comprises approximately a third of UK food manufacturers of all sizes—making products as diverse as



- ④ **Allergen management:** the overall process and measures which food manufacturers put in place to deal with the risk arising from food allergens
- ④ **Allergen:** allergenic ingredient or component of a food.
- ④ **Cross-contact:** the process whereby an allergen gets into a product in which it is not an ingredient e.g. through residues of a previous product manufactured on the same equipment.
- ④ **Cross-contact allergen:** allergen present through cross-contact
  - Synonyms: residual allergen, adventitious allergen
- ④ **Precautionary labelling:** information provided on the label in addition to that required by law, which warns the allergic consumer about the possible presence of an allergen which is not part of the recipe.
  - Synonyms: “may contain” labelling”, advisory labelling, defensive labelling
- ④ **Management Action Level:** Level of cross-contact management where despite control efforts the product would not elicit adverse reactions in the vast majority of sensitive individuals, i.e. through working to GMP and GAP with HACCP controls and segregation measures, a “visually and physically clean” standard can be achieved for food contact areas.
- ④ **Free-from (product):** product produced to a standard which guarantees to a high level of confidence the absence of a specific allergen. For allergens, a minimum standard is below analytical detection by commonly used methods.