Allergen Bureau

Agricultural Cross Contact

The origins of the guideline

Informing the food industry

FACTS Assessing Agricultural Cross Contact Masterclass
21st February 2024

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- The Allergen Bureau is the peak industry body representing best practice food industry allergen management globally
- Membership based organisation established to provide food industry with rapid responses to questions about allergen risk management in food ingredients and manufactured foods
- Established in 2005, pre-competitive, 'not-for-profit', Allergen Bureau directors provide voluntary, unpaid services

Global Member

THE COCA-COLA COMPANY

Full Members

- ALDI Stores
- BBF Hull Limited

What is Agricultural Co-Mingling?

Agricultural co-mingling is the result of different crops being grown in proximity with each other, sharing the same fields due to crop rotation, and/or sharing the same equipment/facilities for harvesting, transport, and storage, despite the application of allergen controls as part of Good Agricultural Practices (GAPs).

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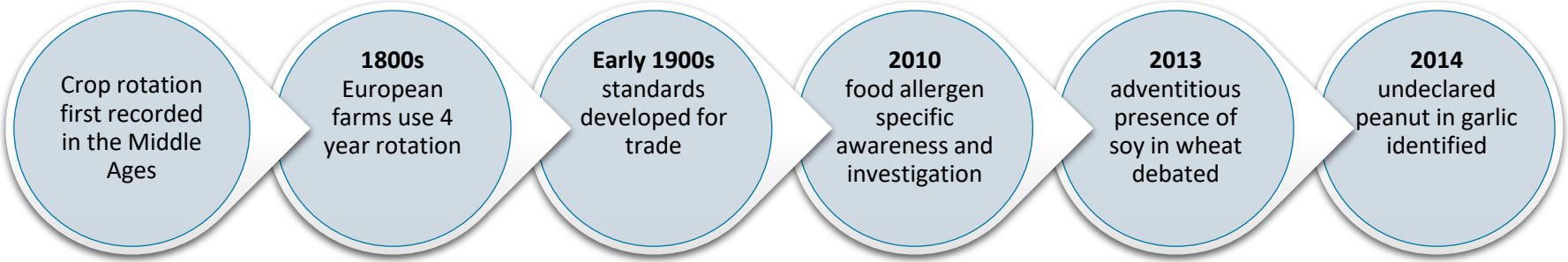
What do we know about Agricultural Co-Mingling?



- Agricultural practices are unlikely to change, however GAP are encouraged
- Industry requires a way in which to identify and manage the presence and prevalence of potential allergen cross contact

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Why was the Resource Needed?

The two key questions that required answering are:

1. How do you obtain accurate information?
2. How do you use the information once you have it?

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The Allergen Bureau's Agricultural Co-Mingling Working Group has been committed to producing practical guidance to assist industry to identify and manage agricultural cross contact risk.

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Who Is The Guide For?

Relevant to all areas of the food industry the new guide will be a useful tool for

- growers,
- primary producers,
- food ingredient manufacturers, importers,
- suppliers,
- food business operators (FBO's),
- importers of packaged foods.

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The Resource Provides Guidance on:

1. Agricultural co-mingling
   a) Information on cross contact allergens associated with crops and commodities
   b) Agricultural practices and controls
2. Ingredient questionnaire
3. Risk rating matrix and recommended sample numbers
4. Sample collection, volume, frequency
5. Allergen analysis recommendations
6. Intended used of the outcomes of analysis
7. Case studies

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Business Impacts to Consider

- Supply chains are complex and uncontrollable
- Risks still require identification
- Unexpected allergen presence occurs due to:
  - Intentional addition (VACCP) or;
  - Unintentional / accidental – adventitious presence
- Due diligence must always be demonstrated, even when it's hard
  - "applying all practicable measures"
- Brand and reputation damage
- Recalls cost $$

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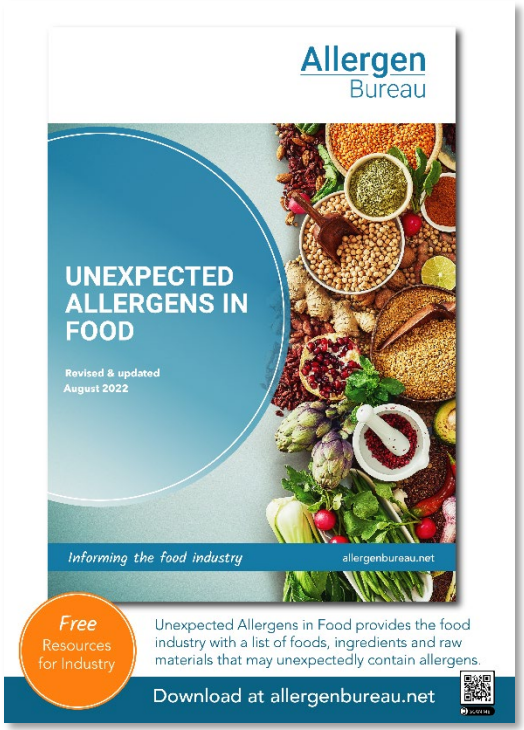
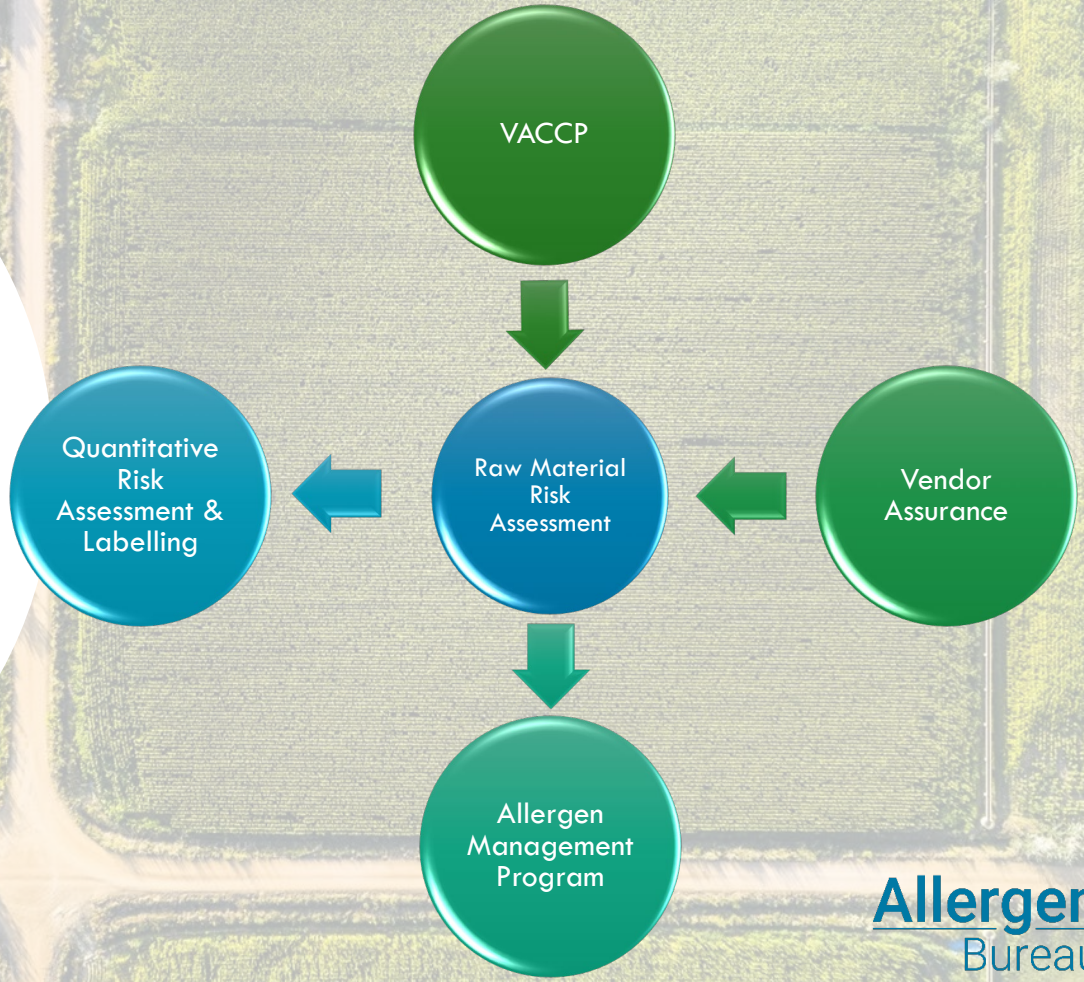
Resources Available



Designed to integrate with, and inform other existing programs



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Overview Of The Risk Assessment Steps

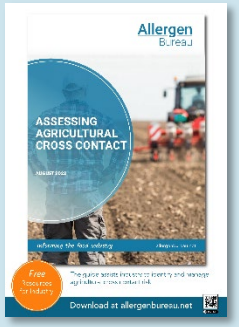
Use the guide, supplier and raw material information complete the Raw Material Risk Matrix Questionnaire

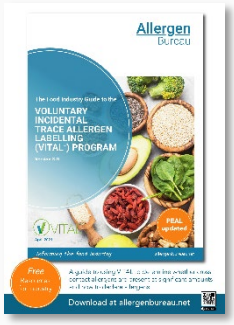
Determine the risk rating:
Low
Medium
High

Use sampling guidance to collect the number of samples required

Conduct allergen analysis, review results, determine presence and prevalence

Use the outcome to inform your Allergen Management Plan and Quantitative Risk Assessment





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Raw Material Risk Matrix Questionnaire

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Reset Questionnaire

Risk Assessment Questions		Response Options					
		Lower Risk				*Higher Risk*	
Q1	Is the material procured from an equivalent regulatory jursidiction?	Yes	1			No	5
Q2	Does the supply chain include growers or processors from international sources?	No	1	single international source only	3	multiple international sources (grows and/or processors)	7
Q3	Is the supplier GFSI certified?	Yes	1			No	4
Q4	Does the supplier have a documented and robust allergen management plan?	Yes	1			No	7
Q5	Does your business have a detailed understanding and tracebility of the agricultural supply chain (i.e Crop rotation, potential cross contact risk due to shared equipment, storage, transport, sourcing and trading etc)	Yes *Go to Q6*				No *Skip to Q10*	31
Q6	Are other allergenic crops used in crop rotation or grown in close proximity?	No	1			Yes	6
Q7	How is the commodity traded / sourced?	Controlled backward integration programs	1	Contracted farms	3	General markets with lesser known controls	6
Q8	Are effective measures in place to prevent or minimise potential allergen cross contact from shared equipment and facilities throughout the supply chain?	Yes	1	Partially	4	No / Unknown	7
Q9	Are there primary and secondary processors involved in the processing and/or manufacture of the material?	No	1	Some of the time	3	Yes / Unknown	5
Q10	Are effective measures in place to identify, prevent or minimise the presence of other allergenic materials similar in size and colour as the commodity being purchased (due to difficulties in cleaning and/or separation)?	Yes	1	Partially	4	No / Unknown	7
Q11	Has allergen analysis been conducted on the allergen of concern for this commodity?	Yes *Go to Q12*	1			No *Skip to Q14*	11

Sampling Guidance

Risk Rating	Number of Samples	Supporting Standards
Low	5	EN ISO 948:2009 Spices and condiments Sampling[8]
Medium	Minimum 10. Square root of consignment (if above 100 units)	USFDA Investigations Operations Manual 2020 Chapter 4 – Sampling section 4.3.7.2 Random Sampling[12] EN ISO 948:2009 Spices and condiments Sampling[8] DS/CEN/TS 15568 2007 Foodstuffs – Methods of analysis for the detection of GMO and derived products – Sampling strategies, Section 7[7]
High	Minimum 15. 10 % of consignment (if above 150 units)	Codex CAC/GL 50- 2004, Table 8, page 34 based on the ICMFS Micro sampling guides[9] EN ISO 948:2009 Spices and condiments Sampling[8] DS/CEN/TS 15568 2007 Foodstuffs – Methods of analysis for the detection of GMO and derived products – Sampling strategies, Section 7[7]

How were the sample numbers decided?

- Review of current sampling standards for commodities
- No sampling plans for allergens in commodities
- All sampling plans for commodities assume homogeneity
  - Sample numbers decrease the larger the lot size
- Required a “sweet spot”
  - Enough samples to give confidence in determining prevalence
  - Acceptable cost to industry

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Sampling Considerations

- Sampling approach recommended is random to encourage non-biased sampling
- Recognises allergen presence is not always homogeneous
- Includes the recommendation to use visual inspection of the material in addition to analytical analysis
- Sample collection – dependant on the consignment (stream sampling, probes, or automatic sampling)
- For static sampling – use a probe to allow for cross sectional sampling
- Sample volume is recommended

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Presence and Prevalence

Presence

- Considers the form of the allergen
- Allergen detectability
    - visual and or analytical

Prevalence

- How often can you detect the allergen in the number of samples analysed?
- Informs the level of risk introduced into the facility

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Application of the Risk Assessment Outcomes

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1. Raw material

- Information may be difficult to obtain
- Lacking information results is a higher risk rating outcome
- Risk reduction strategies can be implemented when gaps are identified
- Detection of allergens through analysis and or visual assessment informs allergen management practices

VACCP

Vendor Assurance

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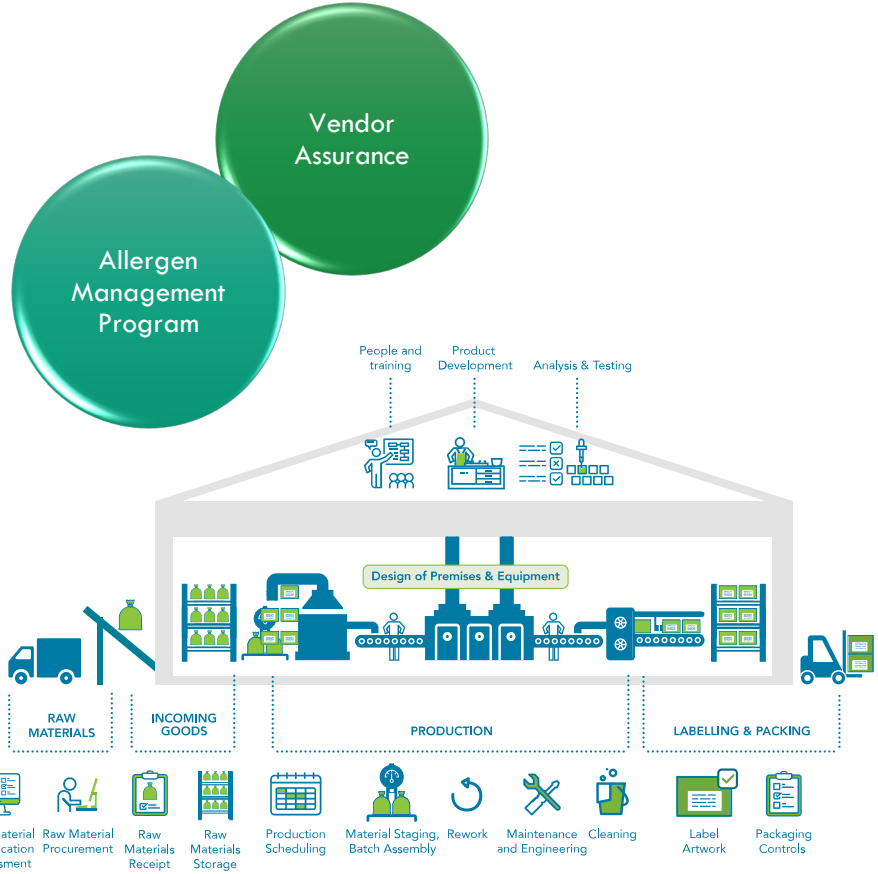
2. Allergen Management

Determining **presence and prevalence** of the allergen in the material:

- Informs the allergen risk profile in the facility
- Informs AMP procedures
  - Material handling procedures
  - Production scheduling
  - Cleaning



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3. VITAL® 3.0 Risk Assessment

- Identifies the form of the ingredient cross contact
- Allows the business to assess further processing impacts (milling, grinding, etc)
- Analysis informs variability of presence and prevalence (ppm) and aids in determining likely maximum cross contact levels
- Where assessed agricultural cross contact is determined to be homogeneous, unavoidable and sporadic, this can be used in a VITAL risk assessment

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"We can only do what we do because of our members financial support"

The new Assessing Agricultural Cross Contact 2022 Guide is a perfect example of how we use these resources to develop tools for the benefit of the whole industry.

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The Sample and Testing Sub-Working Group

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- Rhonda Spyrou (The Kraft Heinz Company)
- Vivienne Balm (The Kraft Heinz Company)
- Dean Clarke (National Measurement Institute)
- Kieran Hopkins (SGS)
- Karl Kusko (ALS Global)
- Joanne Price (HJ Langdon)

We sincerely thank this team for volunteering their time outside of work hours

THANK YOU

Don’t forget to tell your ideas about this presentation and share it with us!

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