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LIFE

# Delicious

KraftHeinz

## The Problem with Particulates

– An Industry Perspective –

Lisa Warren

FAMS  
2023



# Timeline

20 years ago

Allergen labelling becomes mandatory in ANZ

Limited information on how to do this for industry

10 years ago

Allergen Bureau guidance

VITAL and Reference Doses

Now

FAO/WHO work on food allergens

Allergen Bureau Ag co-mingling

- guidance
- sampling plan
- risk matrix questionnaire

Next

Particulates




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# **It's time to start a conversation about particulates**



# What is a particulate?

- Separate and distinct particles of material of localised concentration
  - Do not mix homogeneously with other parts of the food
  - May consist of, or are likely to aggregate into, an entity which contains a level equal to or greater than the relevant Reference Dose
  - May be identified in ingredients, raw materials or production processes
  - When a particulate cannot be eliminated it is determined to be Action Level 2 in the VITAL Program
  - AL2 allergens should be declared on labels in a PAL statement
- 



# Assessing lentils at home



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# Lentil assessment by industry



## Considerations



### Volume

- Hundreds of tonnes
- Demand vs availability
- Sourced from many growers, states & countries



### Climate

- Drought
- Flood
- Earthquakes
- Impacts upon supply



### Agricultural practices

- Crop rotation
- Neighbouring crops
- Shared harvesting equipment
- Individual growers and consolidators



Ag X  
Lupin

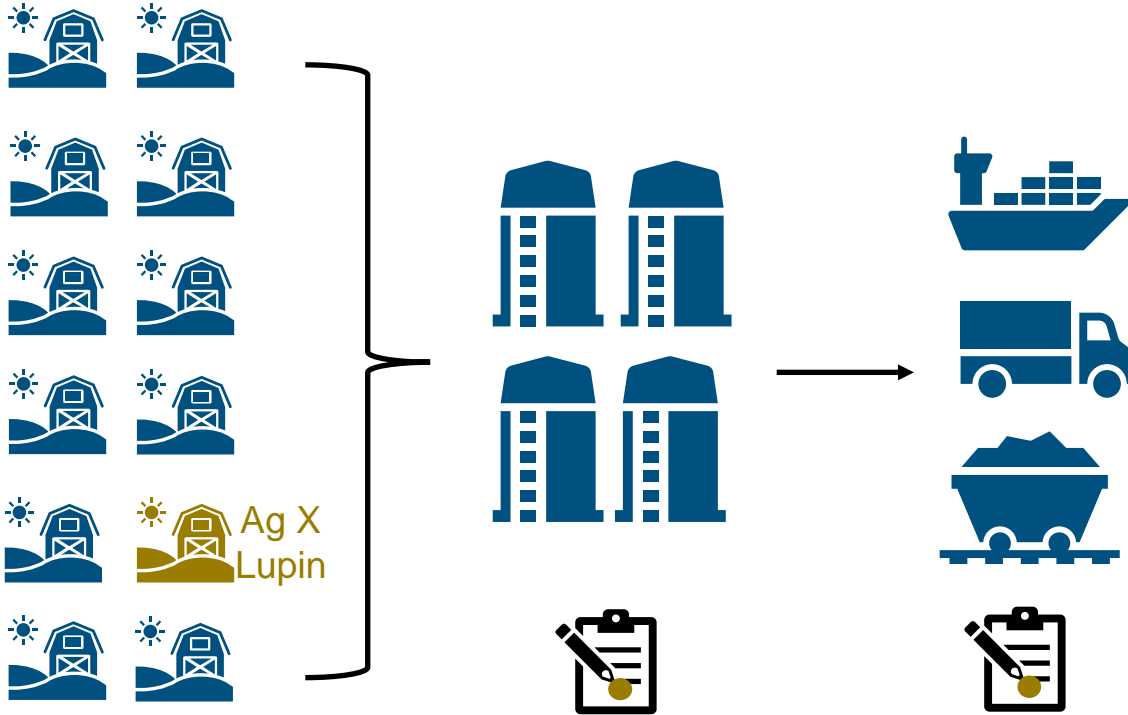


### Allergen Bureau Ag co-mingling

- Guidance
- Sampling plan
- Risk matrix questionnaire



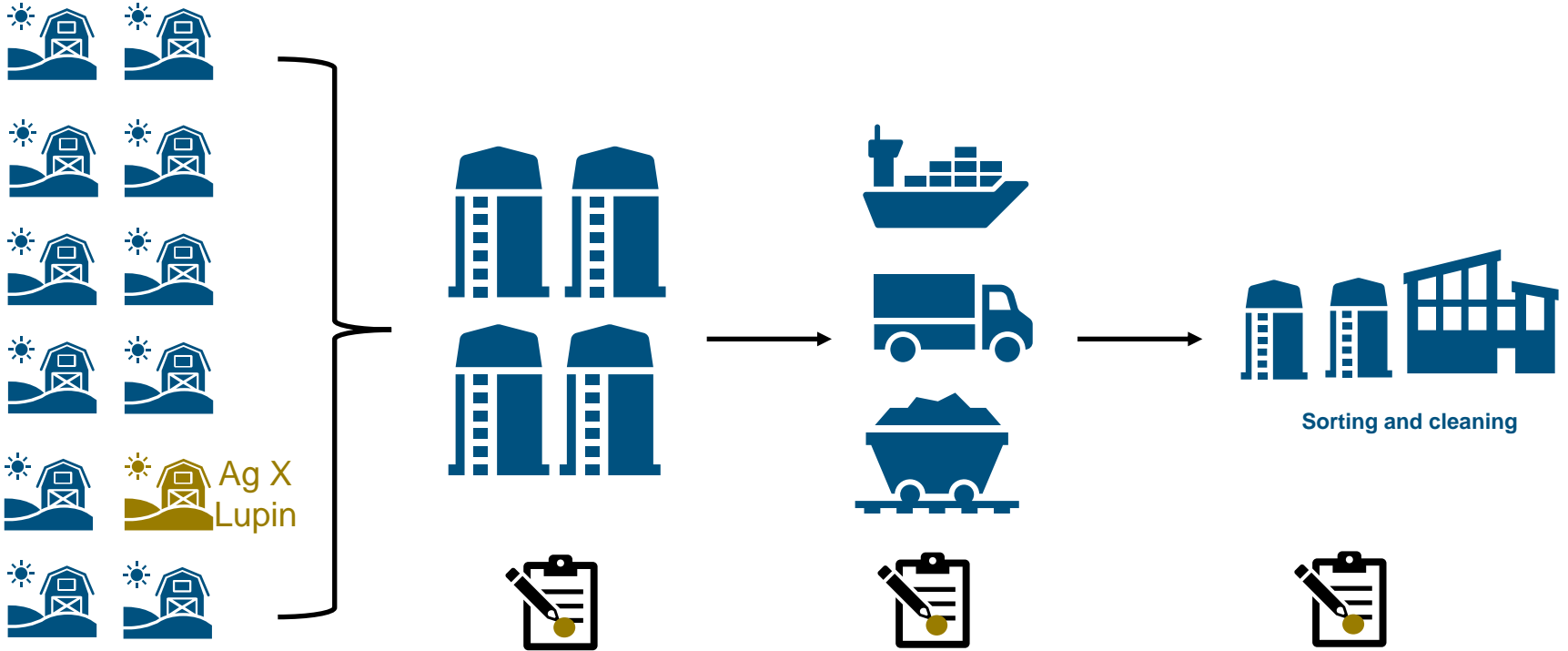
# Lentil assessment by industry



## Considerations

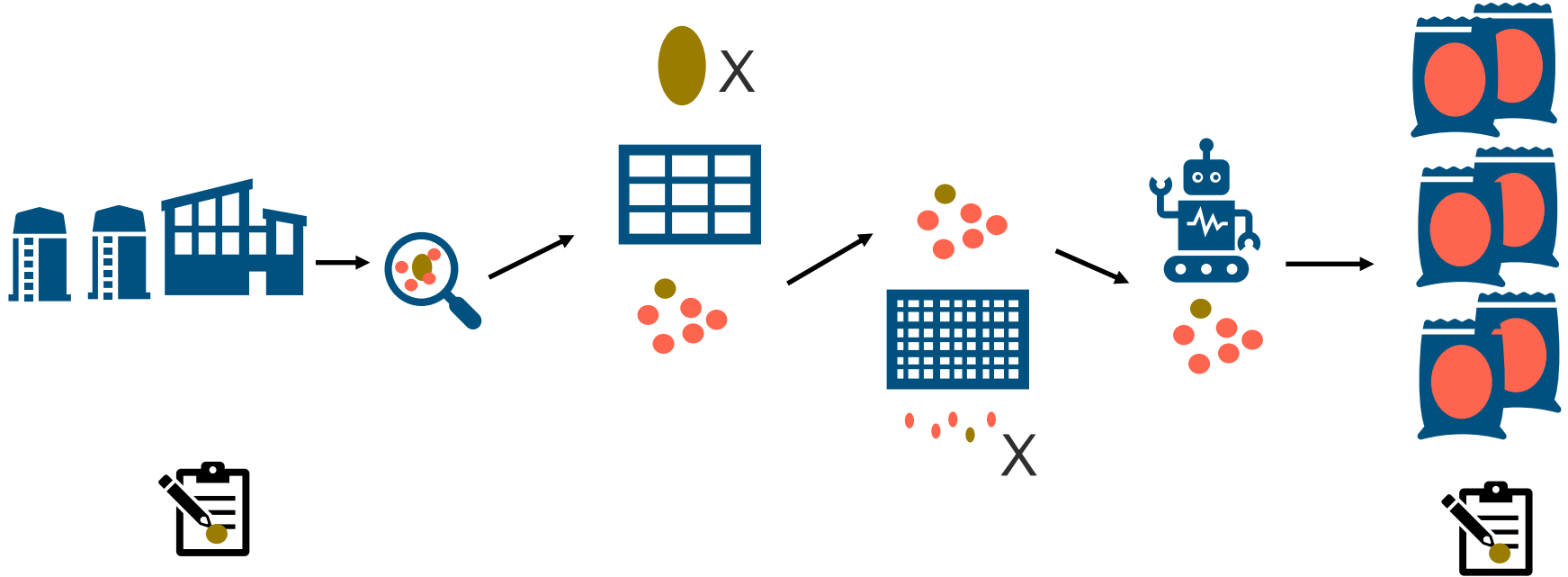
- Stock combined
- Stored silos or pits
  
- Transport system may also transport other allergens

# Lentil assessment by industry

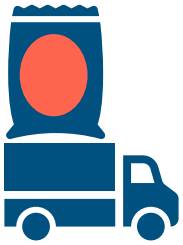




# Lentil assessment by industry

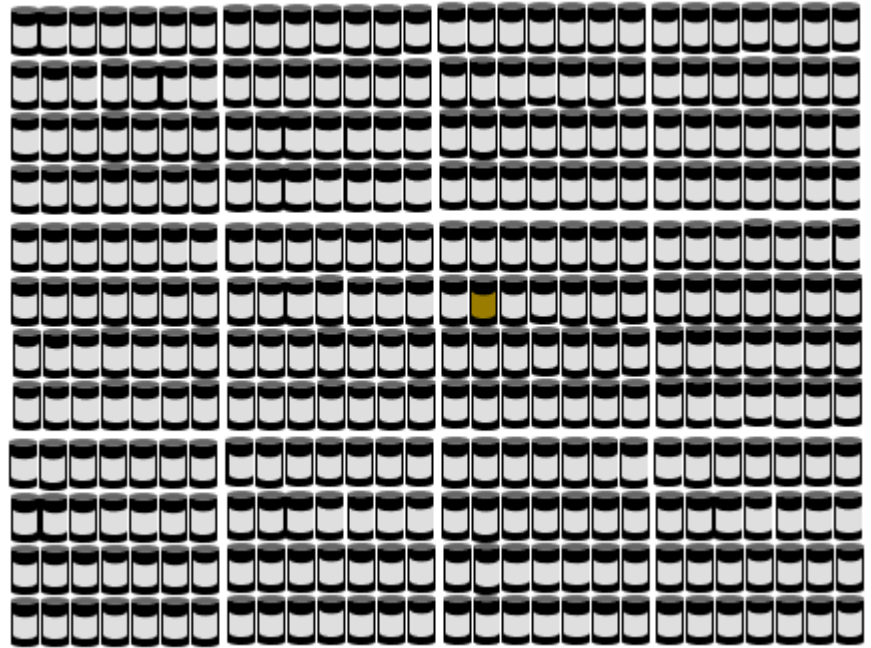


# Lentil assessment by industry



PIF  
Lentils

Lupin CC  
particulate



May Contain: Lupin



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Are there times when  
this PAL is OK and  
times when is it not?

Consumers not trusting  
the PAL statement

Is it really a  
particulate?

# Is this outcome OK?

Changing agricultural  
circumstances

Each business has its  
own level of validation  
acceptance

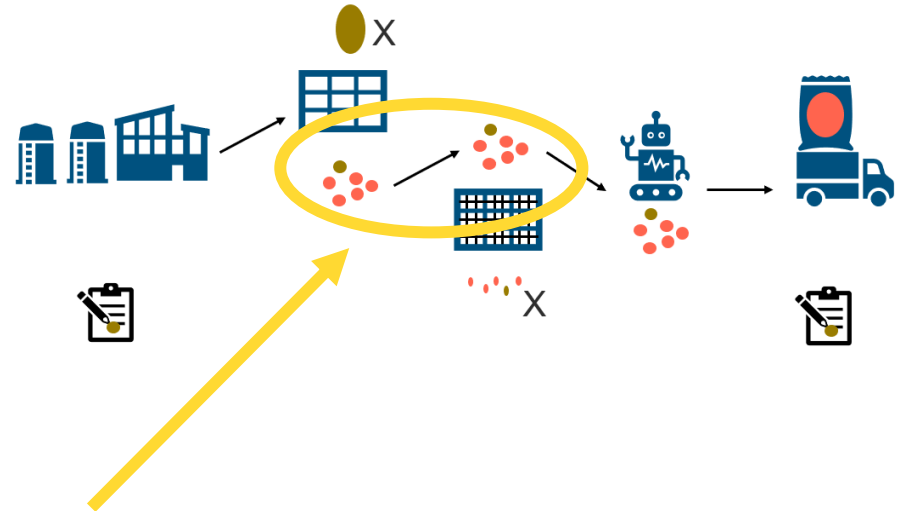
Prevalence  
versus risk



# Deakin University & Kraft Heinz Student project

## When is a particulate a particulate?

- Remember, a particulate is a piece contains a protein concentration equal to or greater than the RfD
- Well.....is this piece  $\geq$  RfD?
- Literature review
- How much do these particulates weigh?
- Design a method and test it



# Deakin University & Kraft Heinz Student project

## Example Maize Polenta with Soy CC

- RfD for soy is 0.5mg protein ED01 and 10mg protein ED05 (Allergen Bureau VSEP)
- How big are these particulates?
- How much does one particulate weigh?
- How much protein (& moisture?) is in one particulate?
- Protein test methods? N vs amino acid? N factor?
- Is this > or < RfD?





# Deakin University & Kraft Heinz Student project

## Other crops that may be impacted

- Spices
- Herbs
- Whole / milled pulses
- Whole / milled grains





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**What else can be done?**





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**Thank You**

