

FOOD SAFETY INSIGHTS



IAOM LATIN AMERICA
CONFERENCE

BARRANQUILLA, COLOMBIA

MARCH 9, 2023

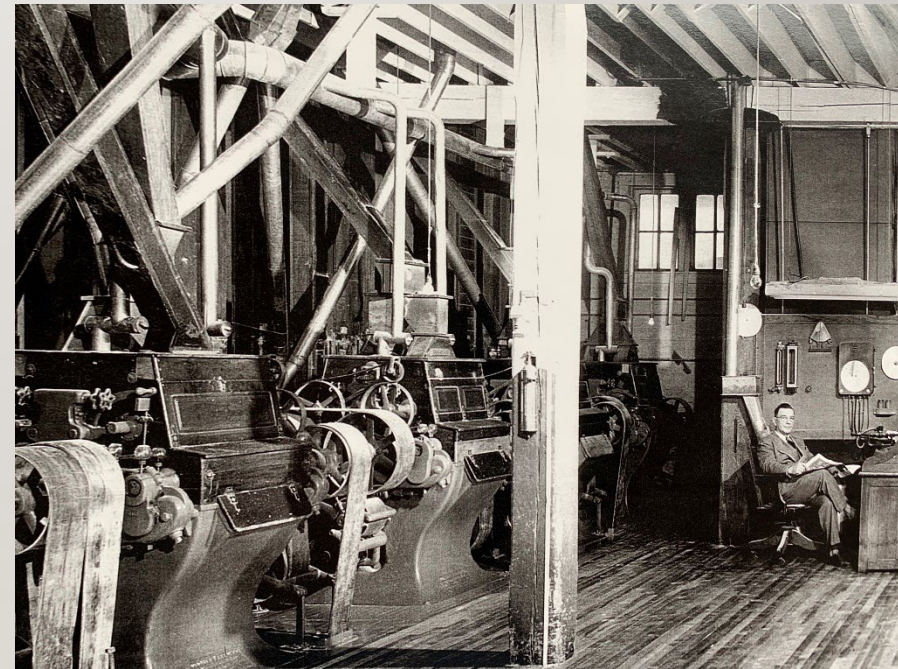
OUTLINE

- My Background
- IAOM Food Protection Committee
- Evolution of Food Safety in Flour Milling
- Questions



WORK HISTORY

- Cargill/Horizon Milling
 - 1990: Prod. Trainee – Wichita, KS
 - 1991: Prod. Supv. – Ogden, UT
 - 1993: Asst. Supt. – Stockton, CA
 - 1994: Plant Manager – Wellington, KS
 - 1997: Milling Division EHS/FS Manager – Wayzata, MN
- ADM Milling – Overland Park, KS
 - 2008: Division QA Manager
 - 2013: Director QA and Food Safety
 - 2016: Director Food Safety and Regulatory
- Miller Milling – Bloomington, MN
 - 2019: Corp. Director Food Safety and Regulatory
 - 2021: Director Quality, Food Safety and Regulatory.



FLOUR FOOD SAFETY - EVOLUTION

- First HACCP plans in US around late 80's/early 90's
- Many CCP's to now very few or none. True risk-based hazard analysis.
 - Food Safety vs. Quality
- Change driven by customer expectations vs regulation.



© CanStockPhoto.com - csp43862481

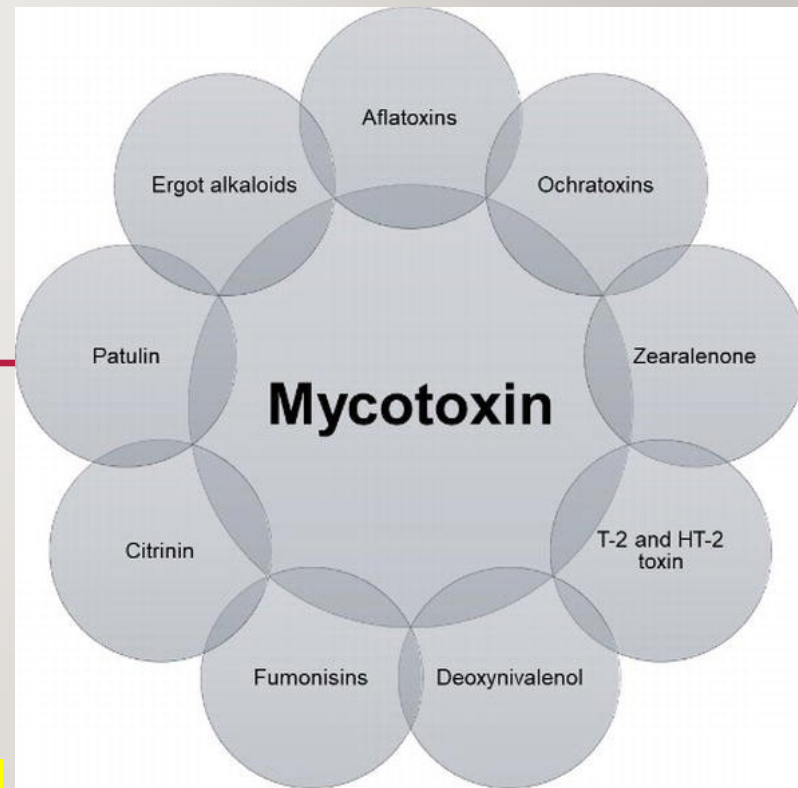
FOREIGN MATERIAL

- Primary risk for Flour Milling
- Controls at last possible point
 - Sifters – typically <500 micron for flour
 - Metal Detectors – CCP on packaged product.
 - 20 Kg bags 1.5mm FE.
 - 2-5kg bags 0.5mm FE
 - Magnets
 - Rare earth
 - In-line screen (7-12mm) at bulk delivery to customer



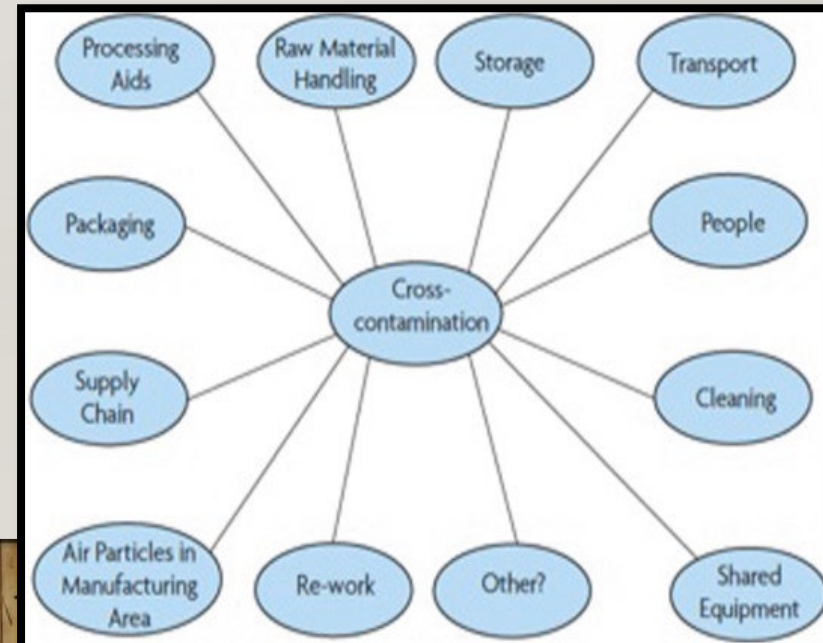
CHEMICAL

- Pesticides
 - Heavy Metals
 - Mycotoxins
- Grain Management
 - Contracts
 - Pre-shipment testing
 - Receipt analysis
 - Frequency needs to be risk based.



ALLERGENS

- Allergen regulation varies by country.
- Adventitious presence - Soy, Wheat, Sesame, Peanuts, Nuts
 - Unavoidable cross contact during harvest, storage and transport
- Allergen control very difficult with dusty products (bakery-mixes) - dry cleaning
- Use recipe formulation to reduce allergen complexity
- Labeling very important



PATHOGENS

- Pathogenic E-coli
- Salmonella
- Present in grain
- Are a risk in any grain-based food that is not fully cooked.
 - Doughs, batters
 - Consumer behavior
 - Eating uncooked frozen foods.



FOOD DEFENSE

- Terrorist event with intent for mass casualties
 - Internal aggressor
- “Minor” attacks – contamination with intent to cause company harm
 - Dead mouse in package
 - Spitting in product...



Door Locks
Cameras



QUESTIONS

