



**Food Safety
Considerations
Dairy Processing**

Amanda J. Kinchla, M.S.
Food Safety Extension Specialist
UMass Amherst
kinchla@umass.edu



If you're in the green, you're good to go!

Food Safety vs. Food Quality

Food Safety: Focuses on hazards that pose a risk to human health, including:

- Biological
- Chemical
- Physical

Food Quality: Focuses on quality factors that are desirable in a food product, including:

- Consistent product size/texture
- Coloration
- Maintain aroma & flavor (avoid rancidity/off-odors)

Food Safety and Food Quality are different

Food Safety Risks with Dairy



Hazards & Recalls

- Hazards
 - Biological
 - Chemical
 - Physical
- Recalls
 - Feb 11, 2022: Ice Cream, Royal Ice Cream Company, Inc. (CT), *Listeria monocytogenes*
 - Dec 28, 2021: Cream Puffs, Poppies International, Inc. (NC), Metal contamination

Risk Factors

- Raw milk - *Brucella*, *Campylobacter*, *Cryptosporidium*, *E. coli*, *Listeria*, and *Salmonella*.
 - Pasteurization
- Value-Added Dairy Risks
 - Soft cheese (queso fresco, brie, etc.)
 - Pasteurization & sanitation
 - Ice cream
 - Pasteurization & sanitation
 - Yogurt
 - Pasteurization & pH controls



Who Covers What?

- **Local Boards of Health**
- **State Boards of Health** – [Food Protection Program](#)
- **Federal Regulations**
 - **USDA**
 - Meat
 - Poultry
 - Egg Products
 - Out of shell products and egg quality
 - **FDA**
 - **All other food products**
 - Dietary supplements
 - Bottled water
 - Food additives
 - Infant formulas

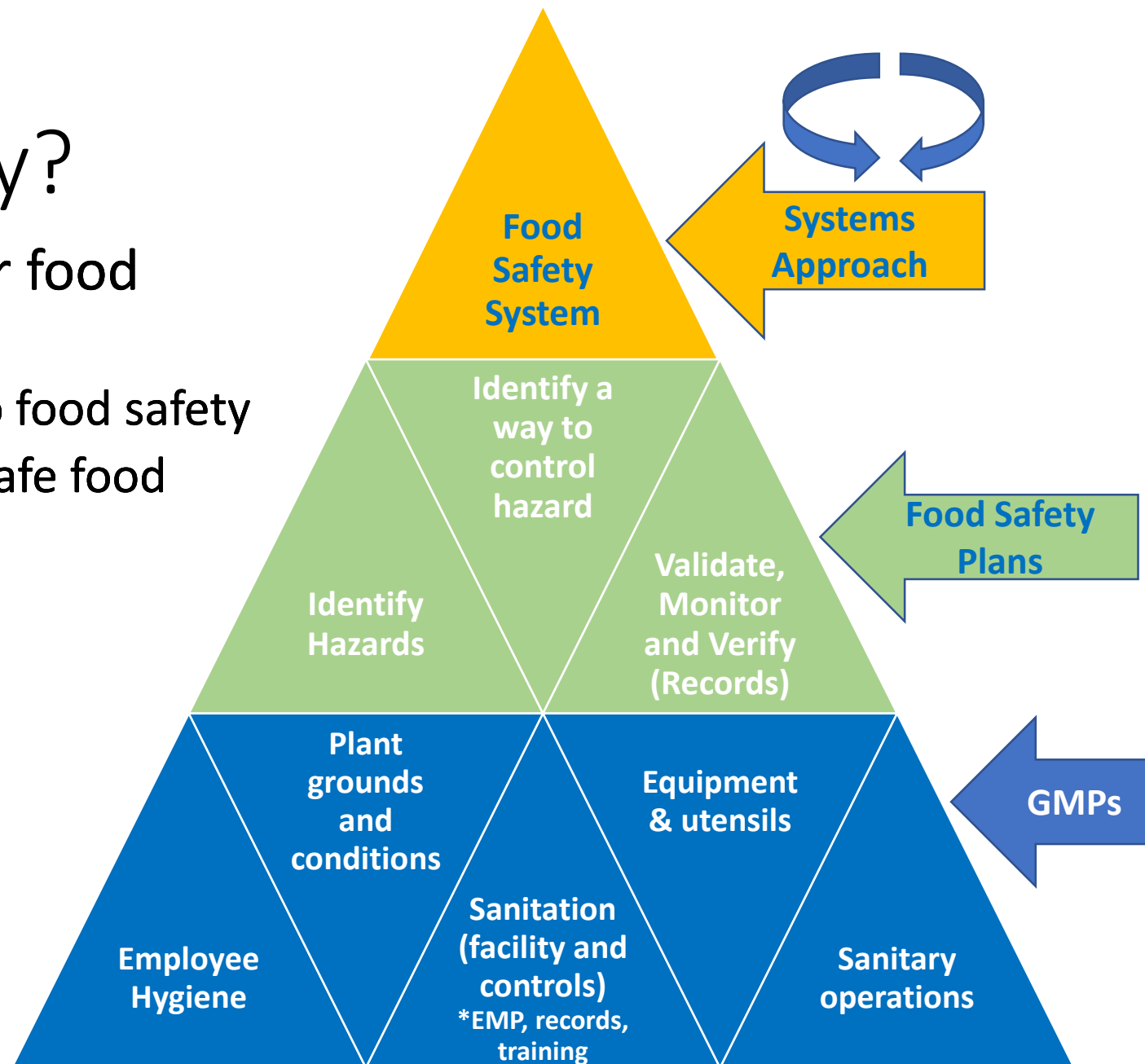


Food Safety Regulation - Processing

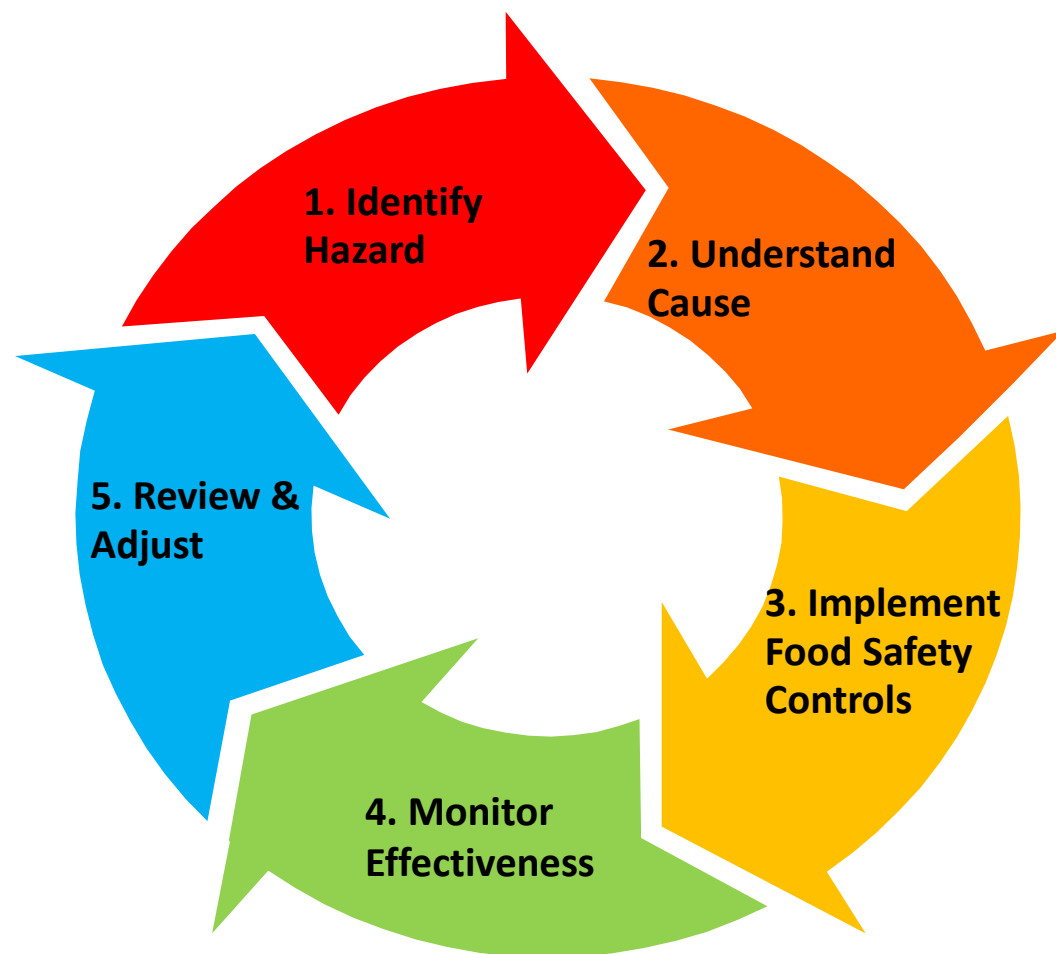


GMP's: What are they?

- GMP's are the support for your food management
 - Operating procedures related to food safety
 - Support the development of a safe food product
 - Includes aspects such as
 - Employee hygiene
 - Plant and grounds condition
 - Sanitary facilities and controls
 - Equipment and utensils
 - Sanitary Operations
 - Employee Training



General Approach to Food Safety Plans



Under the **Preventive Controls** rule, all food processors must implement and follow current GMP's
[21 CFR 117 Subpart B \(GMP regulation\):](#)



Establish Control – Identify, control and monitor hazards associated with dairy



Imaged Sourced, [FlexLink 2021](#).

- **KNOW** the food safety risks associated with your food product, food process, and food facility
 - Environment
 - Processing risk
 - Product risk
- Identify a way to **CONTROL** all of the identified risks
- **MONITOR** the control for every production run with **RECORDS**

Co-Packing Considerations

- Considerations for Co-Packing
 - Food safety credentials
 - Food Safety Risk factors
 - Supporting process validation(s)
 - Who's responsibility?
 - Control limits
 - Inventory purchasing
 - Product distribution
- Shared use vs. Co-packing (benefits and risk)

Shared Use Facility		Co-Packing	
Benefits	Limitation	Benefits	Limitations
Less expensive	Risk of cross contact	Process efficient	More costly
Technical Resources	Scheduling	Reduces operational efforts	Volume minimums
Learn from other processors	Equipment sharing	Established GMPs	Longer production lead times
		Established licensing	Rely on other teams QA

Preventive controls - attestation

Attestation – Exemption to parts of the PC rule for small processors

- [Guidance on qualified facility attestation](#)
- Based on **revenue sales and needs** to be **routinely resubmitted** to attest that your business still complies with this regulation.
- A “qualified facility” in part 117 or part 507 is subject to **modified requirements** in 21 CFR 117.201

**Qualified Facility Attestation Using Form
FDA 3942a (for Human Food) or
Form FDA 3942b (for Animal Food):
Instructions for Submitting Your
Attestation**

U.S. Department of Health and Human Services
Food and Drug Administration
Center for Food Safety and Applied Nutrition and Center for Veterinary Medicine
September 2018

Resources

- MDAR – [Food Entrepreneur Guide](#)
- UMass Extension Programs
 - [Preventive Controls for Human Food](#): May 10, 11, & 12, UMass Amherst
 - <https://ag.umass.edu/food-science/resources>
 - <https://ag.umass.edu/value-added-food/projects>
- [NECAFS Resources](#)
 - Coming soon! Food safety resources specifically for small processors.
- Cornell Dairy Foods Extension - [Course Calendar | CALS \(cornell.edu\)](#)



Amanda J. Kinchla, M.S.
Food Safety Extension Specialist
UMass Amherst
kinchla@umass.edu