
Food Safety Basics

Hazard Analysis & Critical Control Point (HACCP)

Objective: Understand the objectives, structure and possible project uses for HACCP



Who Cares and Why

Saves your business money in the long run

Avoids you poisoning your customers

Food safety standards increase

Ensures you are compliant with the law

Food quality standards increase

Organizes your process to produce safe food

Organizes staff promoting teamwork/efficiency

Due diligence defense in court.

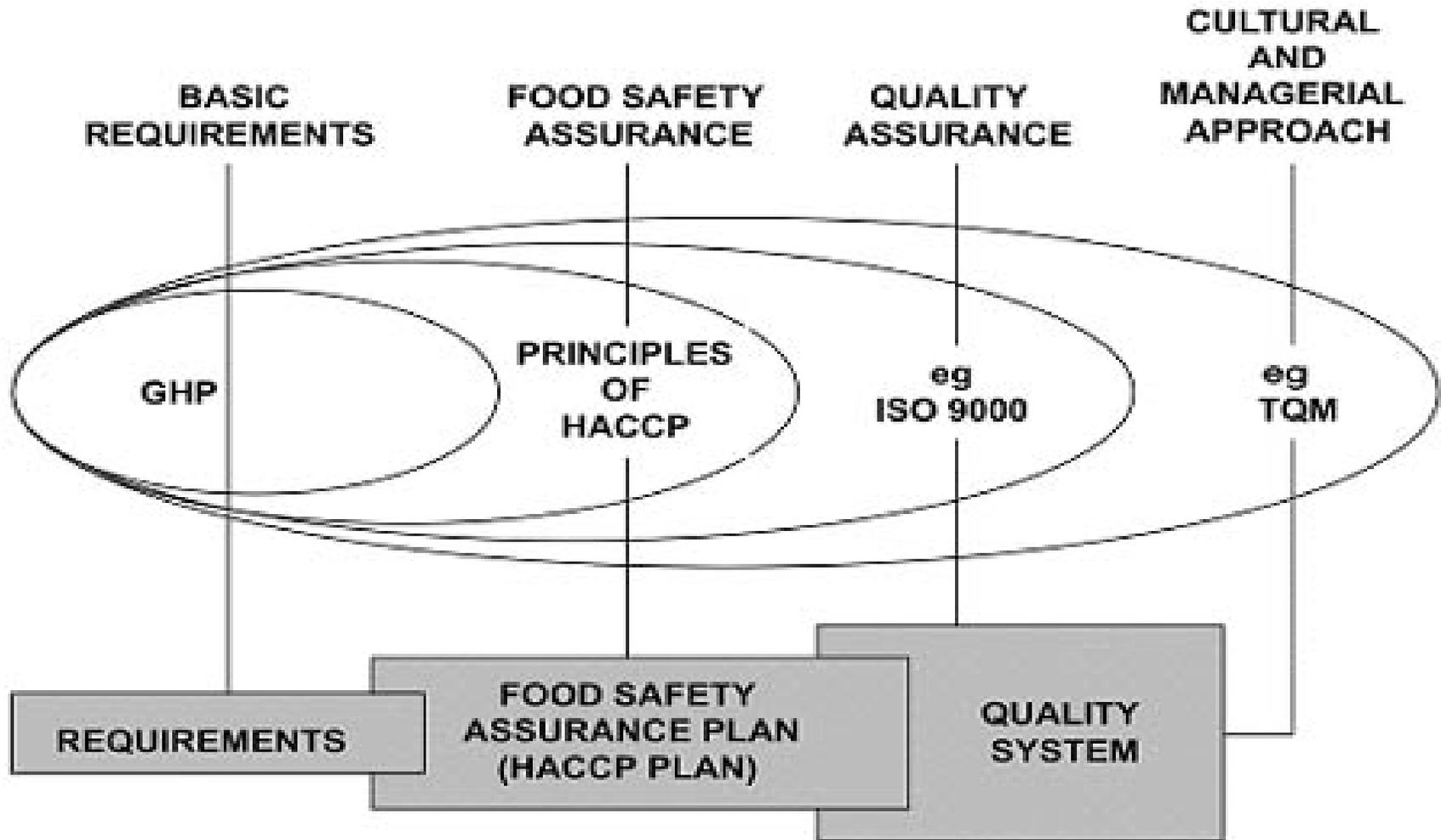


Origins of HACCP

- Pioneered in the 1960's during Apollo program
- Adopted by many food processors and the U.S. government
- Designed to minimize the risk of food safety hazards.

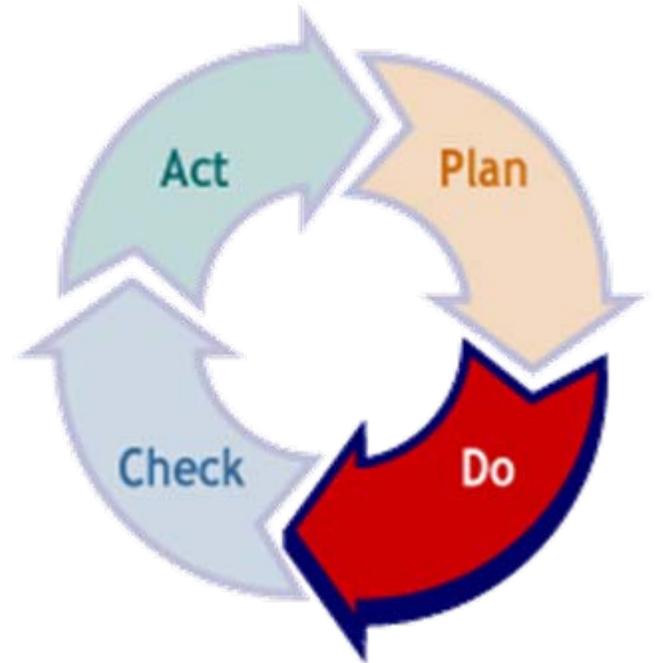


Where Does HACCP Fit in?



HACCP Basics

- Used in food processing and service
- Preventive and risk-based
- A management tool used to protect the food supply against biological, chemical and physical hazards
- Voluntary but becoming a requirement through integration into ICS per buyer requirements, ISO 22000, etc.



Hazards

- A **biological, chemical or physical** agent that is reasonably likely to cause illness or injury in the absence of its control



Biological Hazards

- Microorganisms
 - Yeast
 - Mold
 - Bacteria
 - Viruses
 - Protozoa
- Parasitic worms



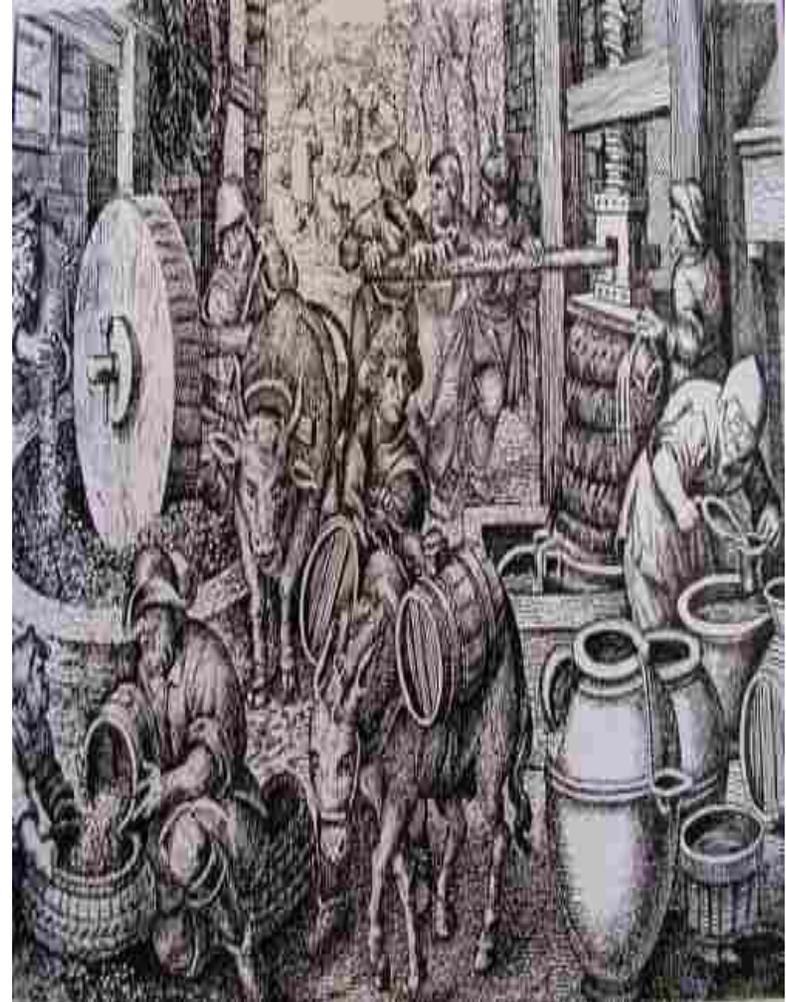
Chemical Hazards

- Naturally Occurring
- Intentionally added
- Unintentionally added



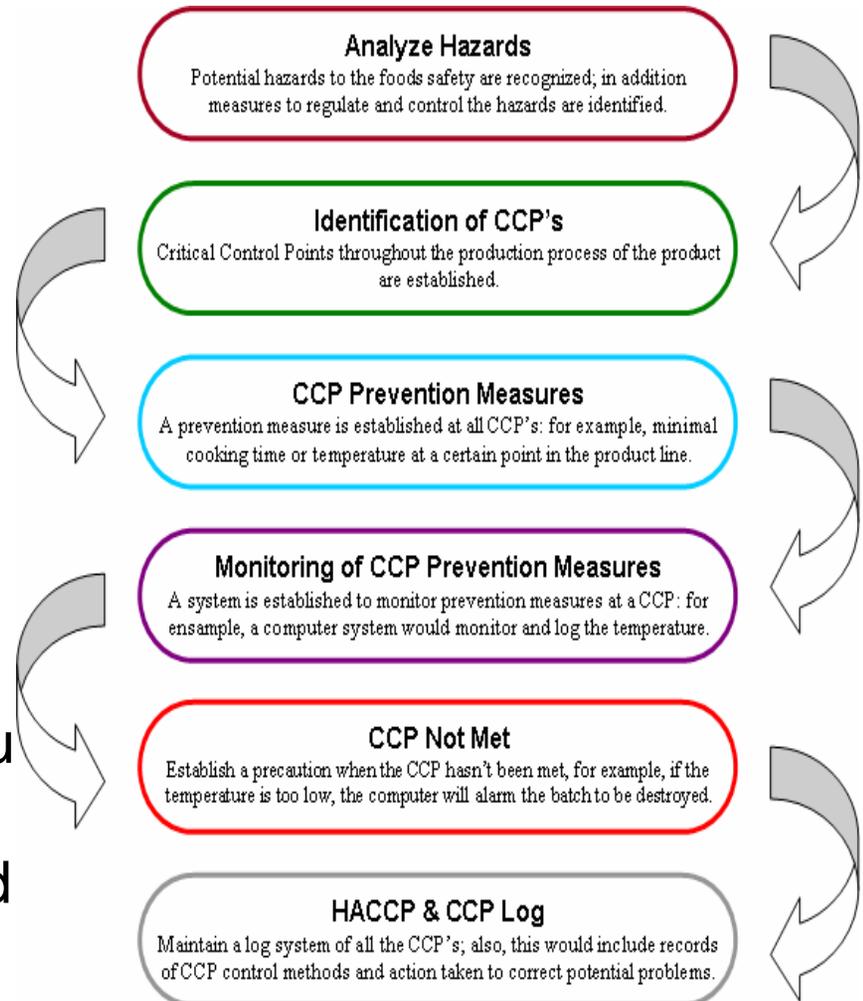
Physical Hazard

- Any potentially harmful extraneous matter not normally found in food
 - ❑ Glass
 - ❑ Wood
 - ❑ Stones
 - ❑ Metal
 - ❑ Plastic

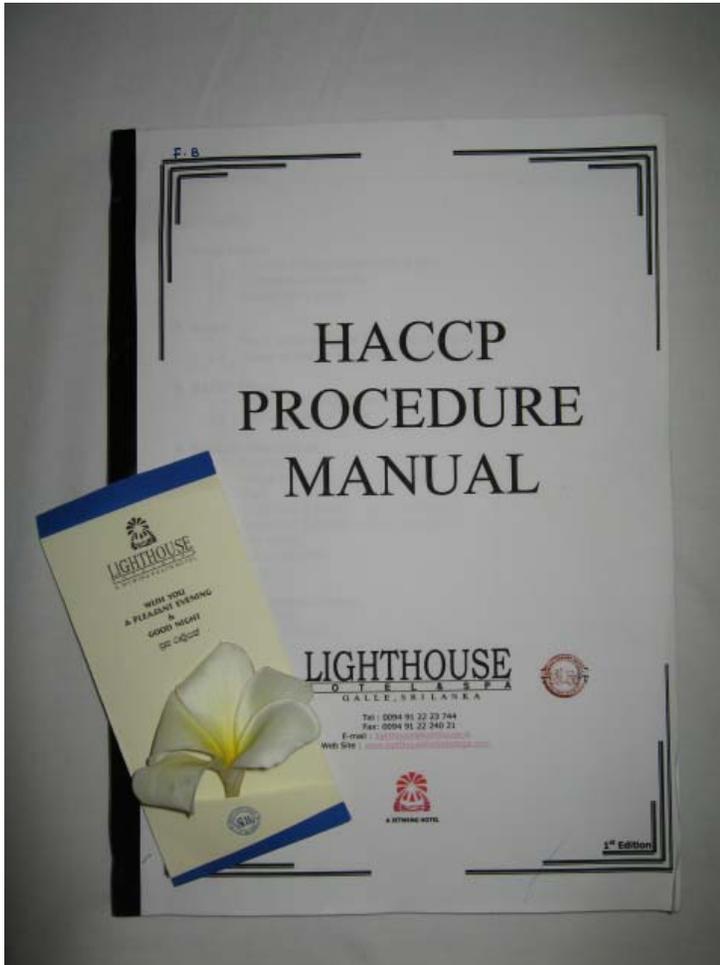


Principles of HACCP

- ◆ Conduct hazard analysis
- ◆ Identify critical control points
- ◆ Establish critical limits
- ◆ Monitor each CCP
- ◆ Establish corrective actions
- ◆ Establish verification procedures
- ◆ Establish record-keeping and documentation procedures



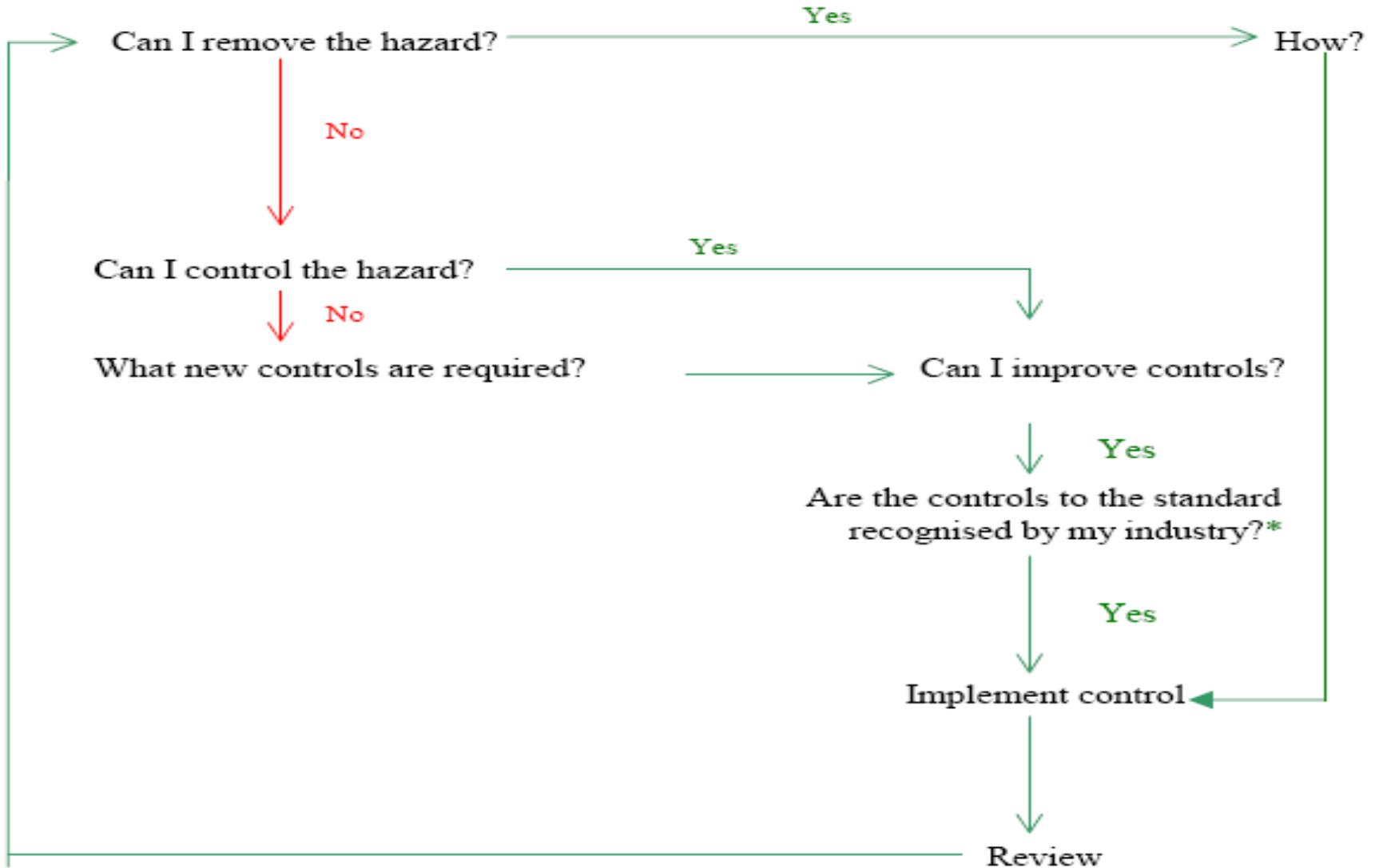
Hazard Analysis Basics



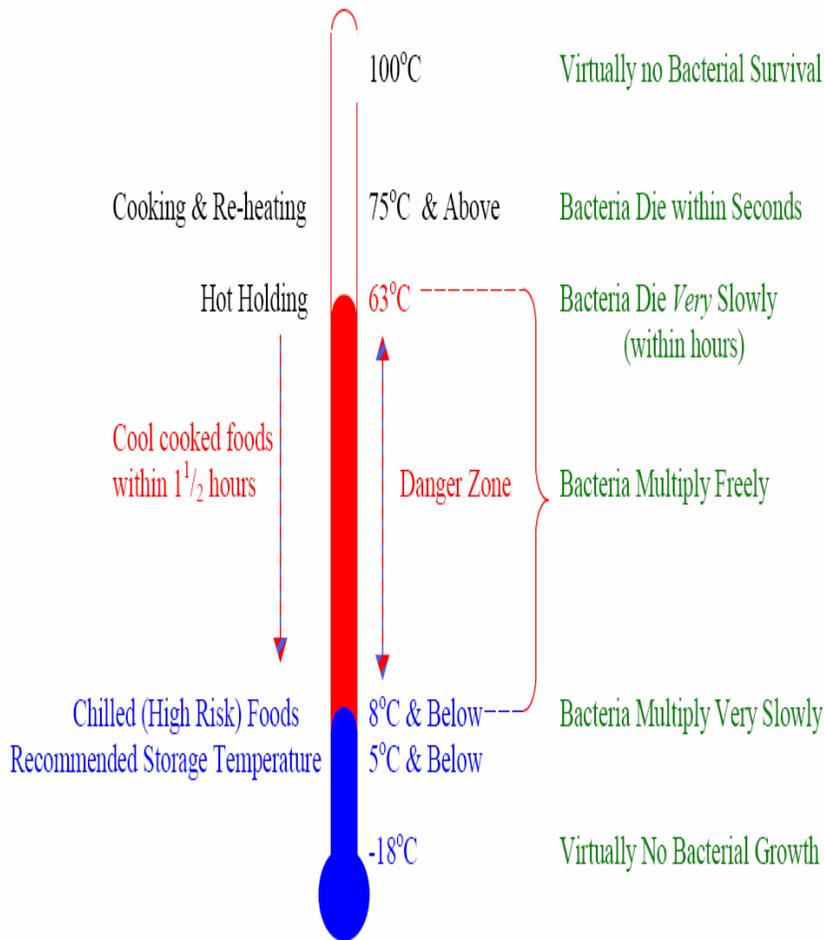
- Purchase & delivery?
- Storage?
- Processing
- Preparation?
- Cooking/Re-heating?
- Cooling? Hot holding?
- Service?



Control Measure Determination



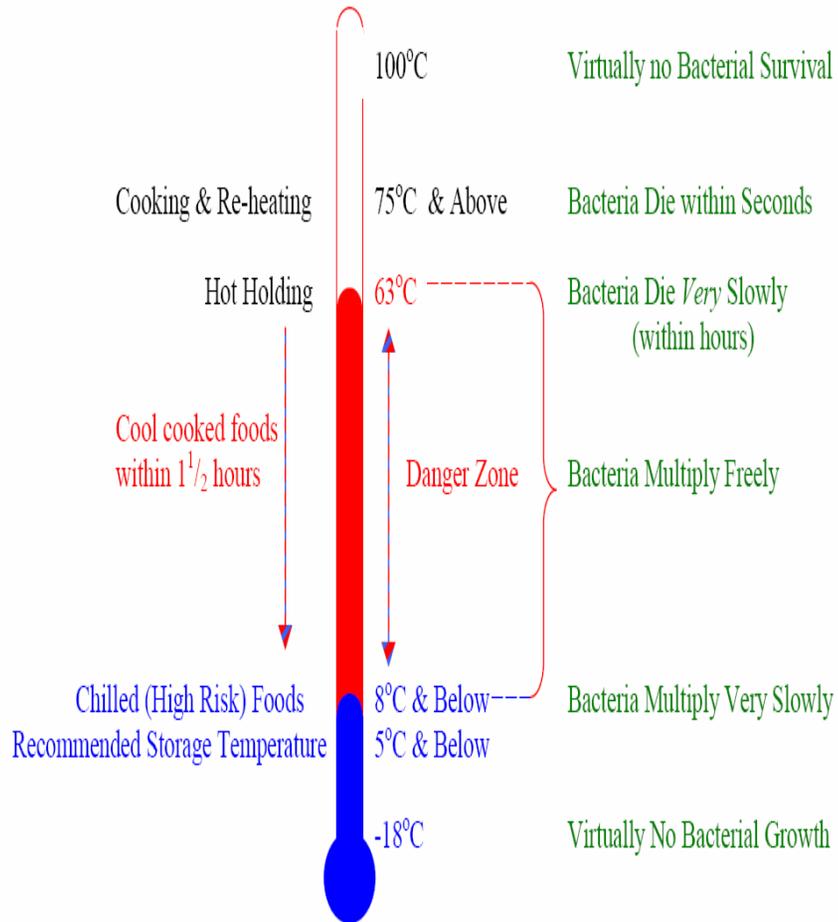
Critical Control Point Limits



- Identify Critical Control Points
- Determine Critical Limits



Setting Limits & Monitoring Performance



- Temperature reading records
- Visual observation
- Organoleptic analysis
- Stock rotation checks
- Setting of safe limits
- Training
- Supervision



Prerequisite Programs

- Procedures, including GMPs, that address operational conditions provide the foundation HACCP systems
 - **GMP**
 - Good Manufacturing Practice
 - **SCP**
 - Sanitation Control Procedure
 - **SSOP**
 - Sanitation Standard Operating Procedure
 - **FMEA**
 - Failure Mode Effective Analysis
 - **HACCP**
 - Hazard Analysis and Critical Control Point



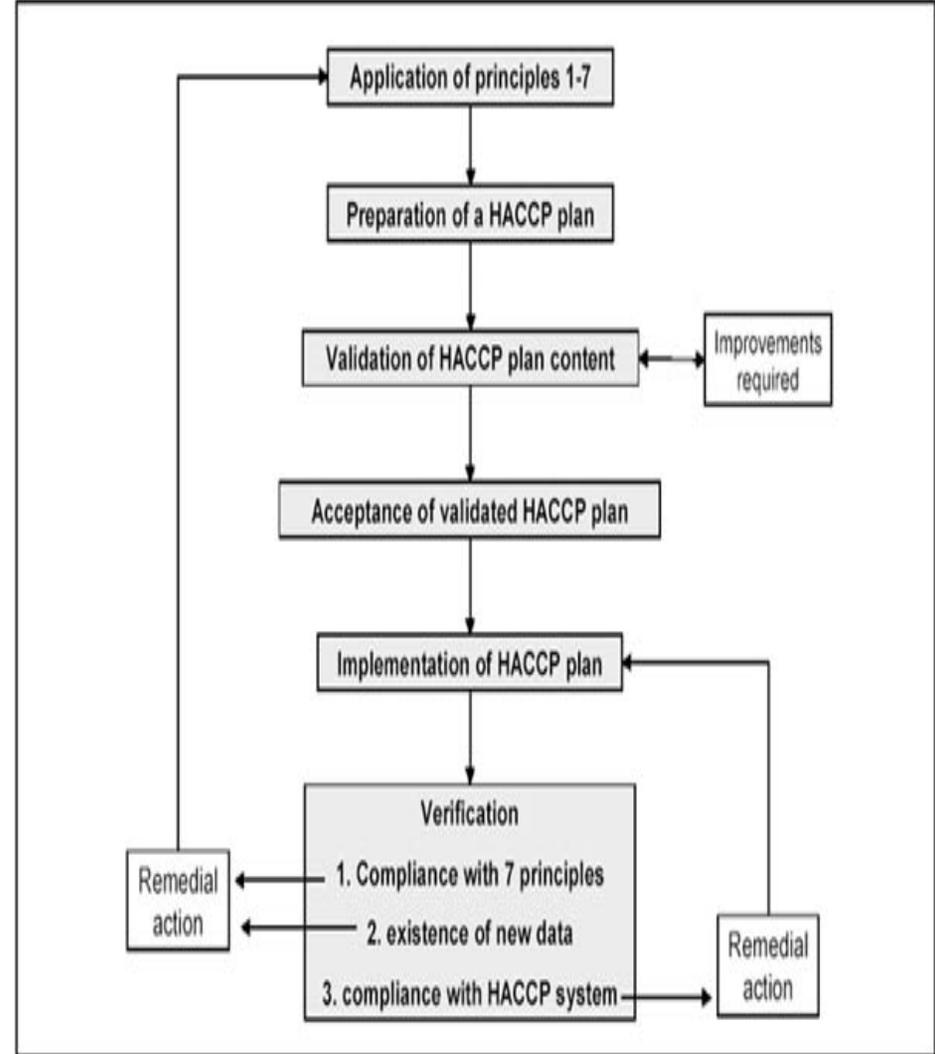
Common Prerequisite Programs

- Facilities & equipment
- Standard operating procedures
- Supplier controls
- Production specification
- Personnel policies
- Traceability and recalls



Preliminary Steps | How to HACCP

- Assemble HACCP team
- Describe production & distribution systems
- Identify intended use and consumers of food
- Develop flow diagram
- Verify flow diagram



HACCP Plan & Support Documents

- Hazard Analysis Worksheet
- Records related to performing hazard analysis and establishing critical limits
- Data used to establish safe product shelf life
- HACCP team members and their responsibilities
- Summary of preliminary steps taken in the development of a HACCP plan
- Prerequisite programs

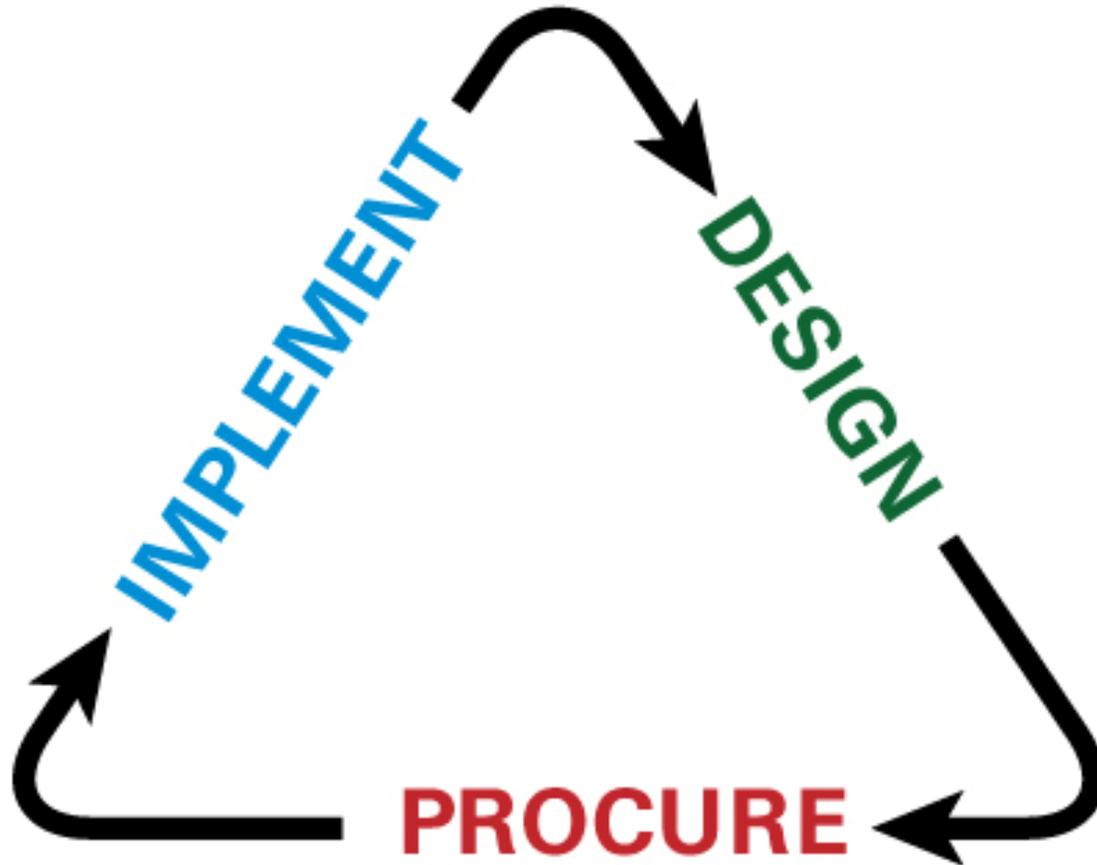


Elements of Verification

- CCP verification activities
 - Calibration of monitoring devices
 - Targeted sampling and testing
 - CCP record review
- HACCP system verification
 - Observations and reviews
 - Microbiological testing
 - Documentation coherency
 - Management review
- Actual process changes
 - Legal compliance
 - Buyer confidence



How HACCP can help USAID projects



HACCP Wrap-up

- Preventative approach to food safety
- Can help identify process improvements
- Reduces the cost of end product testing
- Provides evidence of due diligence
- Reduces the likelihood of product recall
- Enhances customer trust
- Improves staff motivation and efficiency

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Exercise

- Break into three groups and use the olive oil production process diagram to describe how the principles of HACCP could be used in the design, procurement, and implementation of a project promoting olive oil production

