HACCP and ISO
Development of a food safety

John G. Surak
Original principles of HACCP

- Identification of hazards
- Determination of critical control points to control any hazard
- Establishment of monitoring systems
House of food safety

HACCP
- Preliminary steps to HACCP
- Seven Principles of HACCP

Prerequisite areas

Adapted, Ciafrani et al. 2002
Preliminary steps to HACCP

- Assemble the HACCP team
- Describe the product and its distribution
- Describe the intended use and the users of the product
- Develop the process flow diagram
- Verify the process flow diagram
Seven principles of HACCP

- Conduct a hazard analysis
- Determine the Critical Control Points (CCPs)
- Establish Critical Limits (CLs)
- Establish monitoring procedures
- Establish corrective action
- Establish verification plan
- Establish recording keeping and documentation procedures
*Prerequisite areas for HACCP*

- Training
- Personnel practices
- Premises equipment and facilities
- Good Manufacturing Practices
- Cleaning, sanitation and pest control
- Receiving, transportation and storage
- Traceability and recall
- Supplier control
- Hazardous material handling
International expansion
of HACCP
ISO WD 22000:200x

- Food safety management system - Requirements
- Scope
  - Defines food safety management system using Codex’s seven principles of HACCP
  - Auditable
  - Can be used for certification
**ISO WD 22000:200x**

- **Scope**
  - Will link HACCP to prerequisite areas and SSOPs
  - Structure will be aligned with ISO 9001 and ISO 14001
  - Provides a mechanism for communication of HACCP concepts internationally
Tentative timetable for development of the standard

- March 2003  ISO CD 22000:200x
- Sept 2003   ISO DIS 22000:200x
- May 2003    ISO FDIS 22000:200x
- Sept 2004   ISO 22000:200x
**ISO WD 22000:200X**

- Structure will include
  - Policy
  - Planning
  - Implementation
  - Operations
  - Performance assessment
  - Improvement
  - Management review
Relation of ISO 22000 to HACCP

- Assemble HACCP team
- Describe product
- Identify Intended use

- 5.3 Food safety team
- 7.1.3 Raw materials and food contact materials and 7.1.4 End product characteristics
- 7.1.5 Intended use
Relation of ISO 22000 to HACCP

- Construct flow diagram
- Existing control measures
- On-site verification of flow diagrams

- 7.1.2 Flow diagram
- 7.1.6 Description of process steps and other control measures in place
- 7.1.2 On-site confirmation of flow diagram
Relation of ISO 22000 to HACCP

- Principle 1 Conduct hazard analysis
- Principle 2 Determine CCPs
- 7.2.2 Hazard identification and characterization
- 7.2.3 Hazard assessment
- 7.2.4 Identification and assessment of control measures
Relation of ISO 22000 to HACCP

- Principle 3 Establish critical limits
- Principle 4 Establish a monitoring system
- Principle 5 Establish corrective actions

- 7.3.2 Determination of critical limits for CCPs
- 7.2.3 Design of the monitoring system
- 7.3.4 Actions when critical limits are exceeded
**Relation of ISO 22000 to HACCP**

<table>
<thead>
<tr>
<th>Principle 6 Establish verification procedures</th>
<th>8.3 FSM system validation, 8.2 FSM system verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle 7 Establish documentation and record keeping</td>
<td>4.2 Documentation requirements</td>
</tr>
<tr>
<td>Prerequisite areas (implied)</td>
<td>7.4 Design SSM programs</td>
</tr>
</tbody>
</table>
Globalization and international trade

- There is increased food trade between WTO countries
- Customers around the world are demanding safe food
- Companies around the world are responding by implementing food safety management systems to ensure the production of safe food