Food Control Systems and Role of GMP/HACCP

Regional Consultation Workshop
Implementation of GMP/HACCP in Asia - a status review

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Outline of the presentation

• Introduction
• Effective food control systems
• Elements of an effective food control system
• Risk-based food inspection and Good Practices/HACCP
• Some guidance tools and important websites
Introduction

- **Globalization** - increasing demand by consumers for variety of foods
- Creation of global market - *transboundary movement* and trade of food across countries – imports/exports
- Potential for *spread of contamination* across countries high
- Leading to *increasingly new challenges* & risks to the health & safety of consumers
- **Quality, health, safety, labelling, food fraud** incidents (melamine, horsemeat) acquiring global focus
- Governments have mandate to ensure health and safety of populations (ensure safe food supply) through effective food control systems
A Snapshot of Quality & Safety

- Melamine 2008
- Dioxin contaminated Irish pork in 2008
- E.coli O104:H4 (in 2011) in northern Germany
- radionuclide contamination of food items from Japan
- Horse meat scandal
- Pesticide residues in vegetable Thailand in 2009-11:
Effective food control systems

Objectives

- Protection of health & safety of domestic populations
- Protection from fraud – mislabelled, adulterated, unwholesome foods
- For ensuring safety & quality of food in regional/international trade - facilitates market access
- Contributing to economic development by maintaining confidence in food systems
- Providing a base for Mutual Recognition & equivalence agreements
Effective food control systems

Principles

- Food safety & quality is primary responsibility of food business operator - farmer or producer, processor, handlers
- Food chain approach
- Preventative approach
- Risk-based approach
- Collaboration and coordination
- Cohesive system
- Food safety & QC primary responsibility of producer/processor
Reorientation of Roles & Responsibilities

The Farmer - 1st step in food chain (implementing GAP, maintaining recs)

The Processor
- Ensure production of safe food (GMP/HACCP...)
- Engage in proactive dialogue with regulatory bodies to agree on standards & ensure efficient & effective integration of industry & official food control system
- Upgrade facility, design & implement system, doc & maintain recs

Handlers
- Maintaining conditions necessary for ensuring safety & suitability

The Government
- creating an enabling environment (scientific, technical, financial, infrastructure, regulatory) - compliance by stakeholders
- Guarantor of the system

The Consumer
- demanding a safe product; following directions for storage & use
Preventative Approach based on Risk – in Food Chain

- **Good Practices**
  - **GMP/GHP** - All practices regarding conditions & measures necessary to ensure safety & suitability of food at all stages of the food chain
  - **GAP** – practices that address environmental, eco, social sustainability for on-farm processes & result in safe & Q food

- **HACCP**
  - A system which identifies, evaluates & controls hazards (chemical, physical, biological) significant for food safety
  - An internationally accepted method to reduce & manage risk

- **FSMS** - A holistic system of controls that manage food safety in food business. (GHPs; HACCP; management systems elements & policies; & traceability/ recall system)
Food control systems - elements

• **Policy** framework – highest level commitment & support, central/local govt, integrated control across food chain, voluntary vs mandatory implementation

• **Food laws and legislation** - regulations, requirements or procedures, standards

• **Implementation/ enforcement & surveillance** (inspection, testing, certification, FBDS, food safety emergency management) across food chains

• **Certifications and accreditation**

• **Trainings/ awareness/ education**
Laws/ Legislation

• Legislation to provide for preventative, risk-based approach (RA/GP/HACCP)
• Requirements to be specific & enforceable—Codex advisory texts, use terms like ‘adequate’/ ‘acceptable’ - do not qualify compliance
• Primary responsibility to FBOs
• Authority to CA to enforce, monitor, verify through inspection & control systems at all stages of production, import/exports, processing, storage, transportation, distribution, trade
• Include provisions of approval/registration of establishments or listing of certified units, penalties, fees
• Provisions for national surveillance programmes – FBDS, RMPs
• Recognise GMP/HACCP systems of FBO/ voluntary initiatives
• Be complete to cover:
  ➢ RA/ GMP/ HACCP
  ➢ Performance standards/ maximum limits for contaminants
  ➢ Traceability/ recall/ emergencies
  ➢ Minimum records requirement
  ➢ Others
Implementation / enforcement/ inspection

- Inspection to ensure that food laws/ regulations being complied with ie enforcement

- Focus on Risk-based inspection
  - Risk-based method in which inspection prioritized using a risk based approach - focusing inspection on risk factors that may cause food-borne diseases
    - Poor conditions, procedures, or practices that result in out of control food safety hazards (B,C,P)
  - Change of focus from end product testing and compliance of a product or premises to assessment of controls put in place in operations to address food borne disease risk factors that could put products at risk
    - Inspecting premises & processes for compliance with hygienic & other requirements of standards/ regulations
    - Evaluating HACCP plans & their implementation
What is traditional inspection & Risk-based food inspection

- **Food inspection** – examination of foods or systems for control of food, raw materials, processing and distribution, including in-process & finished product testing, in order to verify that they conform to requirements

- **Risk-based food inspection** – focusing inspection on risk factors that may cause food-borne diseases

- **Food-borne disease risk factors** – are those factors that may cause food-borne disease in consumers if left uncontrolled

  ➢ Poor conditions, procedures, or practices that result in out of control food safety hazards (B,C,P)
Philosophy & approach of risk-based inspection

- Emphasizes on preventative approach rather than corrective actions
- Assessment of controls in place to address food-borne risk factors (verification of compliance of products or premises)
- Places responsibility on various stakeholders specially producer/processor rather than government of producing a safe food
- **Change of philosophy** from regulators to food safety professional
- Fosters partnerships between inspectors and processors for purpose of improving food safety
- Uses limited resources in a more effective manner – risk categorization/ food inspectors to harmonize inspections with other inspectors/ inspections
- Recognition of other certifications (accreditations)
- Investigate & apply enforcement action proportionate to risk
- Provide advice & information to food industry workers & management
Risk-based inspection procedures

- Consider hazards associated with the food
- Review the control measures in place
- Assess the adequacy of pre-requisite plans
- Prepare regulatory action plans including controls
- Verify HACCP plans, traceability and recall plans
- Target high risk establishments with available resources
Risk-based inspection - important considerations and prioritization

• Establishment registration and identification

• Establishment categorization
  ➢ High or low risk based on risk factors
  ➢ Product profiles, processes, consumer groups, etc

• Inspection prioritization
  ➢ History of compliance
  ➢ Product risk profiles
## Traditional vs risk-based inspection

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<thead>
<tr>
<th>Traditional</th>
<th>Risk-based</th>
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<tr>
<td>• Corrective/ reactive</td>
<td>• Preventive</td>
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<td>• Inspection planned randomly – all premises inspected at same frequency</td>
<td>• Prioritization based on risk factors</td>
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<td>• Emphasis on product/premises inspection (compliance to regulation)</td>
<td>• Emphasis on process inspection/controls in place to address risk factors</td>
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<td>• FS responsibility of inspector</td>
<td>• FS responsibility of FBO</td>
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<td>• Sample collection for assurance purposes</td>
<td>• Sample collection for verification purposes</td>
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Aspects to be covered in risk-based food inspection

• Pre-requisite programme
  ➢ Plant construction and equipment
  ➢ Management review
  ➢ Training programmes
  ➢ Customer complaints and handling
  ➢ SOPs, SSOPs
  ➢ Pest control programme
  ➢ Personal hygiene
  ➢ Supplier specifications and controls
  ➢ Record keeping
• Regulatory action plan
• HACCP Plan, traceability
Risk-based food inspection and Good Practices/ HACCP - in summary

• Responsibility of food safety is within the food business

• Both build on same principle of risk-basis

• Food inspection has changed from full scope inspections to targeted inspections on critical points and implementation of preventative measures

• Reviews and evaluates QA and management systems including control measures

• Promotes partnerships b/w inspector and food business
Information, education, communication and training

• Inspectors:
  ➢ food safety and quality;
  ➢ food processing operations, food microbiology & chemistry
  ➢ prerequisite programmes; HACCP system
  ➢ Risk-based inspection techniques;
  ➢ food sampling techniques and broad testing methods

• Food businesses in adopting pre-requisite programmes (GAP/GMP/GHP...) and HACCP

• Consumers – food safety awareness
Other technical support for FBO

- Generic HACCP models/guidance documents – development of HACCP plans, hazards in food chains, critical control points in specific foods, HACCP audits
- Scientific information – Sound basis for CCPs/CLs — identifying hazards, CCPs, CLs, test facilities for validations
- Trainings – develop training curriculum & impart trainings, courses on Good Practices & HACCP
- Evaluating voluntary implementation of good practices & HACCP
- Infrastructure – test facilities, cold storages, strengthening backward linkages (primary production/raw material)
- Data - providing industry RMPs/monitoring data & information to assist in sourcing correct raw materials
- Others
  - Cost/benefit studies - Cost implications of implementation (costs of consultants, certification, manpower time & training)
  - Data & studies relating to impact of HACCP on food safety – as visible benefits not evident
Some guidance tools

Risk-based food inspection manual

FAO FOOD AND NUTRITION PAPER 89

FAO/WHO guidance to governments on the application of HACCP in small and/or less-developed food businesses

FOOD QUALITY AND SAFETY SYSTEMS

A training manual on food hygiene and the Hazard Analysis and Critical Control Point (HACCP) system

Training manual

Implementing ASEANGAP in the fruit and vegetable sector: Its certification and accreditation

FAO/WHO guide for developing and improving national food recall systems

FAO/WHO guide for application of risk analysis principles and procedures during food safety emergencies

Regional Workshop for Asian Countries on Hygiene and Safety in Food Retail 12-14 September 2013, Singapore
Information ExchangeMechanisms/ websites


• Codex web site: www.codexalimentarius.net

• FAO Regional office for Asia and the Pacific http://www.fao.org/asiapacific/rap/home/en/

• Capacity Building and implementation of international food safety standards in ASEAN countries http://foodsafetyasiapacific.net/
THANK YOU