Food Hygiene Health and Food Security

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Food Safety

- WHO Regional Food Safety Strategy:
  - Food safety is defined protecting the food supply from microbial, chemical and physical hazards that may occur during all stages of food production, including growing, harvesting, processing, transporting, retailing, distributing, preparing, storing and consumption, in order to prevent foodborne illnesses.
Pillars of food security and determinant factors of each pillar

**FOOD SECURITY**

**Food availability**
- Domestic production
- Import capacity
- Food stocks
- Food aid

**Access (Phys & eco)**
- Purchasing power
- Income of population
- Transport & market infrastructure

**Stability (of supply & access)**
- Weather variability
- Price fluctuations
- Political/eco factors

**Food utilization**
- Food safety
- Hygiene & Good Practices applied in food chain
- Diet quality & diversity: meeting needs of energy, macro/micro nutrients

Source: adapted from presentation by Ms. Shashi Sareen, FAO
Magnitude of Food Safety Problem in Africa

- 2008 and 2010, food-related diseases occurrences:
  - Anthrax; Typhoid Fever and Botulism; Chemical contamination of seed beans and maize (Zimbabwe; Uganda; Kenya; Nigeria);
  - Salmonellosis due to fish mouse (Mauritius).
  - Mushroom poisoning (Algeria); Bromide poisoning (Angola) and food poisoning (Madagascar, Angola, Kenya, Mauritius, and Botswana);
  - Outbreaks of diarrhoea (Congo, Kenya, Madagascar, Burundi, Comoros, Uganda, Kenya, Botswana and Mozambique);
  - Major outbreaks due to shigellosis (Malawi);
  - Acute aflatoxicosis in Kenya and Konzo in DRC and Angola (Mensah et al., 2012). Aflatoxin-induced liver cancer, immunosuppression problematic in areas with high rates of infections (HBV, HIV, etc..)
Figure 2—Conceptual framework for the impact of illness/disease on agriculture

Condition

Ill health in the agricultural household sector (poor health)

Effect

Death of workers
Absenteeism due to malaria
Family members’ time diverted to caregiving
Loss of savings, household, and farm assets

Outcome

Loss of farming knowledge

Less land under cultivation
Less labor-intensive crops
Less crop variety
Reduced labor efficiency

Impact

Low crop and livestock production

Decline in income from wage labor and off-farm activities
Food insecurity
Decline in farm income

Source: Adapted from Negin (2005) and Asenso-Okyere et al. (2009).
Food Safety and Food Security

- In case of ill-health of the male, the household loses 42% of its nutritious diet and 34% when it is the mother (Donovan C, et al. Kigali, Food Security Support Project. 2003)

- In Sub-Saharan African, the death of the male reduced the production of the cash crops and female death reduced grain necessary for the household survival

- Food safety requirements if not meet:
  - impede established export flows, the economic losses affect both the private and public sector with considerable impacts on communities [15].
Sources of Food Contamination

- Dirty hands during food preparation or consumption
- Food washed with contaminated water
- Fruits and vegetables grown on contaminated soil
- Unclean food preparation areas/kitchen and kitchen utensils
- Raw food and cooked food kept together
- Poor food production practices or transportation
- Food fallen to the ground
- Food handled by persons diseased or with cuts or wounds
- Food from diseased animals
- Cooked food kept at room temperature for more than 2 hours
- Food not covered and therefore accessible to pests, flies and domestic animals
- Unhygienic practices during food preparation
Illustration of chicken as a source of contamination

Courtesy: Dr. Henk van der Zee, Food Inspectorate, the Netherlands
**Five keys to safer food**

**Keep clean**
- Wash your hands before handling food and often during food preparation.
- Wash your hands after going to the toilet.
- Wash and sanitize all surfaces and equipment used for food preparation.
- Protect kitchen areas and food from insects, pests, and other animals.

**Why?**
- Illness affecting food handlers and consumers.
- Germs in food can make us sick.
- Foodborne illnesses are caused by harmful bacteria, viruses, parasites, and toxins.

**Separate raw and cooked**
- Separate raw meat, poultry, and seafood from other foods.
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods.
- Store food in containers to avoid contact between raw and prepared foods.

**Why?**
- Cross-contamination can occur.
- Germs from raw food can spread to cooked food.
- Cooked food can become contaminated if not handled properly.

**Cook thoroughly**
- Cook food thoroughly, especially meat, poultry, eggs, and seafood.
- Bring food to a safe temperature to kill harmful bacteria.
- Use a thermometer to check internal temperatures.
- Reheat cooked food thoroughly.

**Why?**
- Proper cooking kills harmful bacteria.
- Cross-contamination can occur.
- Foodborne illnesses can spread if not handled properly.

**Keep food at safe temperatures**
- Do not leave cooked food at room temperature for more than 2 hours.
- Refrigerate promptly all cooked and perishable food (preferably below 5°C).
- Keep cooked food piling hot (more than 60°C) prior to serving.
- Do not store food too long even in the refrigerator.
- Do not thaw frozen food at room temperature.

**Why?**
- Food is an ideal medium for harmful bacteria to grow.
- Foodborne illnesses can spread if not handled properly.

**Use safe water and raw materials**
- Use safe water or treat to make it safe.
- Select fresh and wholesome foods.
- Choose foods processed for safety, such as pasteurized milk.
- Wash fruits and vegetables, especially if eaten raw.
- Do not use food beyond its expiry date.

**Knowledge = Prevention**
WHO capacity building activities in collaboration with partners

- In collaboration with the FAO:
  - Capacity building; countries effective participation to CODEX; risk analysis

- In collaboration with the AU:
  - Establishment of a Food Safety Authority and Rapid Alert System for Food and Feed.
  - AU/EU programme on Better Training for Safer Food.

- The Global foodborne Infections Network partners (CDC, USA; National Food Institute, Denmark; Reseau International Des Instituts Pasteur, France; Public Health Agency of Canada; FDA, USA; Animal Sciences Group Lelystad, Netherlands; Enter-net, European Union; OzFoodNet, Australia)

- Capacity building of microbiologists and epidemiologists to conduct integrated surveillance for foodborne and other enteric infections from the farm to the table and research
Key Messages

- A comprehensive, coherent and coordinated strategy is needed to make progress towards, food security, food safety, nutrition, and health which are crosscutting issues that permeate the entire life-course from conception to old age.

- Include food safety in Food and Nutrition policies and Strategies and plan of action and establish a diversity of approaches to enhance consumer awareness and participation in food safety activities including commitment to consumer education.
Assuring Food Security, Food Safety and Nutrition – A Shared Responsibility
Let us Be Together