Food Safety and Informal Markets: Animal Products in Sub-Saharan Africa

Monthly CGIAR-Uganda research seminar

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International Livestock Research Institute (ILRI)
1. ILRI and CRP A4NH

2. Food safety & informal markets in sub-Saharan Africa
Large burdens of agriculture on human health

WHO 2012:

56 million deaths per year

38 million from non-communicable diseases

13 million from communicable diseases, maternal, neonatal and nutritional conditions

5 million from injuries

3 mio deaths per year are associated with agriculture
Large burdens of agriculture on human health

Anti-poor:
Almost all of these occur in developing countries
Zoonoses & FBD cost $84 billion a year
4 components

- Value chains for enhanced nutrition
- Biofortification
- Integrated agriculture, nutrition and health programs and policies
- Prevention and control of agriculture-associated diseases
  - Emerging infectious diseases
  - Neglected zoonoses
  - Ecohealth/ OneHealth
  - Food borne diseases

http://www.a4nh.cgiar.org/
http://aghealth.wordpress.com/
**Approach**  ILRI FSZ program

- **Evidence**: Mapping, measuring, targeting
- **Technology**: diagnostics, vaccines, decision support
- **Impact**: Safe food in informal markets
ILRI/BMZ “Safe Food, Fair Food” project
8 countries, 10 partners

- Côte d’Ivoire
- Ghana
- Mali
- Ethiopia
- Kenya
- Tanzania
- Mozambique
- South Africa

Countries included in the ILRI/BMZ project.
Food safety in sub-Saharan Africa

- World wide per year >2 billion cases of diarrhea
- 760,000 children <5 die of diarrhea/year
- Causes mostly water- and foodborne disease
- Animal source foods are single most important source of food borne disease
- In sub-Saharan Africa >80% of animal source foods sold through informal markets

(WHO)
1. INFORMAL MARKETS
major role in food security and safety

- Accessible, affordable and highly preferred
- < 39% of the national GDP
- Involve many actors
- No taxation, no licensing, no inspection
- Prone to activities that may compromise safety
- Perceived to be unsafe
2. HAZARDS are common but don’t always translate into RISK

- Hazards = any agent that can cause harm
- Risk = probability of that harm to occur + consequences
- Food safety management in developing countries is hazard-based and therefore inefficient
Most pork in Kampala is unsafe - health experts

By Hope Muhairwe

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Codex Alimentarius Commission framework for food safety risk assessment

Hazard identification
- Can it be present in food?
- Can it cause harm?

Hazard characterization
- What harm does it cause?
- How does harm depend on dose?

Exposure assessment
- How does it get from source to victim?
- What happens along the way?

Risk characterization
- What is the impact of the harm?
- What is its likelihood?

Risk management/Risk communication

Participatory methods fit well
3. Informal markets are not necessarily dangerous, nor formal safe

- Informally marketed food often safe
- Biggest challenges: improper harvest and post-harvest handling, often because of lack of prerequisites
- Business-oriented attitudes are a major risk to food safety
- Some risks in both markets are underestimated because they do not cause immediate harm
4. Farmers, traders and retailers are risk managers in informal markets

- Contamination of food may occur at any stage in the food chain
- Risk pathway analysis helps identifying CCPs
- Everybody handling and benefiting from the product, must take responsibility
- Interventions often simple but lack prerequisites
**Cow**
- T=2
- C=0
- F=1.8
- S=8.6
- W=0

**Farm**
- 90
- 0
- 3.6
- 7.8
- 6

**Path**
- 105
- 0
- 3.6
- 8.0
- 6

**Consumer**
- Self 4 litres
- 410
- 0
- 3.0
- 5.9
- 30

- Near HH BC
- 1 litre
- 311
- 0
- 3.8
- 7.5
- 10

- Far HH YA
- 1 litre
- 450
- 21
- 2.4
- 4.3
- 35

- Far HH B
- 0.75 litres
- 25 other households
- 16.75 litres

**KEY**
- Total plate count
- Standard: < 5,000
- Coliform count
- Standard: <0.1
- Fat
- Standard: 3.5
- Solids not fat
- Standard: 8.5
- Added water

**HH**
- Household

**Water added**

**Possible Critical Control Point**

**CCP**
5. Understanding values and culture is crucial for managing food safety in informal markets.
• Indigenous knowledge often contributes to food safety
• Eating food is not only for nourishment but also cultural
• Different beliefs about food safety risks
• Difficult to change risky traditional practices
• Some groups are more exposed
6. Food safety management also requires a gender perspective.
• Men and women dominate/are excluded from different segments of the food value chains
• Different benefits, different risks
• Different vulnerabilities (YOPIs)
• Informal markets are very important to women’s livelihoods
7. Efforts in managing food safety in informal markets must be pro-poor

- Poor more prone but cannot afford to fall ill
- Risk management needs training, skills development and prerequisites
- Linking formal and informal markets
- Impact assessment on economic losses and gains of food safety risks is needed
Summary

- Informal markets are vital for food security and economies in SSA
- Informally marketed ASF is often not as dangerous as perceived
- Participatory methods useful in closing data gaps
- Interventions should be risk-based and incentive-based
Outlook: integrated research with CRP L&F “more meat, milk and fish for and by the poor”

R4D integrated to transform selected value chains in targeted commodities and countries.

Value chain development team + research partners

To sustainably increase the productivity of small-scale livestock and fish systems to increase the availability and affordability of animal-source foods for poor consumers.
9 target livestock & fish value chains
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https://safefoodfairfood.wordpress.com/

Better lives through livestock
www.ilri.org