



Safety of animal-source foods in informal markets in the East African Community: Policy engagements

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Key messages

Informal markets are not necessarily dangerous and formal markets are not necessarily safe either

Our research found that while chickens from a local market had slightly higher microbial loads, they still met national quality standards and were just as safe for human consumption as the chicken bought at the supermarket. Studies in Kenya found that compliance with standards was no better for pasteurized milk in the formal sector than raw milk hawked door to door in the informal sector. We also found that indigenous food processing practices widely used in informal markets could reduce disease risks in milk. In Africa, milk is often fermented to preserve it. This preservation method can also decrease the risk of disease. In Ethiopia, it decreased the risk of *Staphylococcus aureus* 15-fold but in Ghana it did not reduce the risk of listeriosis.

Hazards do not always translate into risks

Studies on milk in East Africa found that although zoonotic hazards were present in as many as 1% of household milk samples, infections in people were at least two orders of magnitude less common. This was because nearly everyone boiled milk before consumption.

Participation can improve food safety

Sometimes training and encouragement are more effective at improving food safety than inspection and punishment.

The owner of an abattoir in Mozambique which had been closed thrice for poor sanitation asked to participate in a training workshop to improve the situation and get advice. Today, the abattoir hosts university students as an example of 'best practice' of local abattoirs.

Understanding values and culture is crucial to the management of food safety

The Cinzana community in Mali believes raw milk gives them strength and good health and, according to their perception, milk does not cause any problems. In Ethiopia, consumption of raw meat is widespread in both rural and urban areas. It is part of the local culture and thus although it is a risky practice, it is difficult to influence change in behaviour. On the other hand, cultural practices can be beneficial. Mothers in Ethiopia, Mali and Côte d'Ivoire believe they should feed children and the elderly with raw milk every day as it is considered to be nutritious and helpful for gaining strength.

Introduction

Informal markets form an integral part of African economies. More than 90% of the milk in East Africa is sold through informal channels and informal markets contribute up to 39% of national gross domestic product (GDP). According to a recent study, nearly all marketed food in East and southern Africa is sold in informal markets (open air markets, kiosks, street vendors, small shops and from house

to house). This traditional marketing system will remain a major actor in food systems for decades to come, even with robust economic growth and expansion of the middle class.

According to the World Health Organization and the United Nations Children's Fund, there are about 2 billion cases of diarrhoeal disease worldwide every year and 1.9 million children under five years of age die from diarrhoea each year, most of them in Africa and Asia. This amounts to 18% of all deaths of children under the age of five and means that more than 5000 children die daily as a result of diarrhoeal disease. In Kenya, 18% of all deaths of children under five years of age are due to diarrhoea.

Animal-source foods are the single most important source of foodborne disease. In addition, they may lead to many more diseases and conditions, some of which are very serious such as brucellosis, tuberculosis, cancer, abortion, birth defects, infertility and epilepsy.

Drivers of informal markets

Rapid urbanization of cities coupled with lack of structural development of markets in these new settlement areas promotes the emergence of informal markets that trade in many animal-source food products. Increasingly, the rural poor migrate into the cities. Their need for food makes them resort to informal markets which are more accessible and sell products that are more affordable than the formal markets. Informal markets also have other benefits such as providing credit and selling traditional products from local farms.

Economic and political crises, environmental disasters and wars create a situation where informal markets are the only source of food for internally displaced people. Paradoxically, the informal sector may support the formal sector by providing a market for formally processed food products. In addition, employees of the formal sector use informal markets as sources of goods and services.

The Safe Food Fair Food project in brief

Since 2008, the International Livestock Research Institute and partners have carried out research on food safety in informal markets in sub-Saharan Africa. Our vision is to improve the livelihoods of the poor by reducing health risks associated with animal-source food and improving nutrition and market access for smallholders.

Conventional food safety approaches focus on banning any product with germs or other hazards in it; this is bad news for small-scale farmers. New risk-based approaches seek to find out if there really is a danger to human health and, if so, how significant it is and what can be done about it. Risk analysis is the gold standard for food safety management in developed countries and can be a useful tool for decision-makers in sub-Saharan Africa where resources for addressing all potential hazards are scarce (Figure 1).

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Figure 1: Application of participatory methods in risk assessment: the Codex Alimentarius Commission framework for risk analysis.



Methodology

One-day policy stakeholder consultations were organized in the five member states of the East African Community: Burundi, Kenya, Rwanda, Tanzania and Uganda. Participants included representatives from ministries of health, ministries of livestock and fisheries, national bureaus of standards, municipality health inspectorates, national dairy boards and academia. After an introduction on the purpose of the meeting, the participants were divided into groups to discuss five questions on the safety of animal-source foods in informal markets.

1. Which animal-source foods are sold in informal markets and how are they sold?
2. What are the food safety challenges in informal markets in East Africa?
3. What opportunities exist that may help to introduce food safety in informal markets?
4. Do we have evidence that would allow us to be effective?
5. What evidence is lacking to make a risk-based decision?

Results

What are the food safety challenges in informal markets in East Africa?

- Informal markets for animal-source food lack basic hygiene infrastructure such as running water and toilets.
- There is low awareness of basic food safety. This may contribute to adulteration of raw milk and cross contamination of meat at butcheries.
- Products sold, especially milk and dairy products, may come from many different producers and if one batch is contaminated, bulking may compromise product safety. In Kenya, the milk from 1.8 million smallholder dairy farmers is bulked for sale.
- Inspection services are rare because authorities do not want to be seen to be supporting informal markets. In addition, there are not enough trained personnel to inspect the numerous informal markets for animal-source foods.
- Despite the significant contribution of the informal sector to national GDP, there is little investment by governments to address the food safety issues that afflict the sector.

What opportunities exist that may help to introduce food safety in informal markets?

- There is increasing demand for animal-source food; this could be an incentive to improve food safety in informal markets.
- Organizing the actors in informal animal-source food markets into groups and associations would facilitate training and awareness creation on food safety. Coupled with rebranding and certification, as was instituted in the dairy sector in Kenya in respect to hawked milk, this could create champions in the sector who could encourage other actors to adhere to food safety standards. Equally important is awareness creation among consumers to demand safe food from the sector.
- Food safety regulations and experts exist in formal markets in the region. Rigorous application of these regulations in the informal sector without development of infrastructure and due diligence in creating awareness may lead to poor compliance and lost job opportunities for the many informal sector actors and eventually drive the market underground.
- Introduction of graded food safety curricula at all levels of education could bring about a new generation of East Africans who demand safe food. Conscious perception of food safety in informal markets could help bring the agenda of food safety into focus for the authorities.

Do we have evidence that would allow us to be effective?

- Evidence abounds on the contribution of animal-source food to the burden of foodborne diseases. This should provide an impetus to transform the informal sector towards improved food safety, bearing in mind that the informal and formal markets are complementary and not competitive.
- Two-thirds of emerging infectious diseases are of animal origin. The 2007 Rift Valley fever outbreak in Kenya led to the banning of informal markets and this affected many businesses and consumers who depend on the informal meat sector.

- In 1998, export of fish from the East African Community to the European Union was banned due to food safety concerns (chemical residues and bacterial pathogens). As a result, the sector was reorganized with government support and the safety ramifications are evident even in the informal markets.
- Campaigns in Kenya to create awareness during the Rift Valley fever outbreak in 2007 and avian influenza scare in 2010 were very successful in reaching consumers of formally and informally marketed animal-source food. This suggests that sustained awareness creation on food safety targeting informal animal-source food markets could also be successful.

What evidence is lacking that would be crucial for introducing food safety programs in these markets?

The partner states need to carry out research on food safety risks of concern to animal-source food sold in informal markets to guide allocation of resources and implementation of safety improvements in the sector.

Policy recommendations

- Consolidate food safety regulations to improve their implementation.
- Introduce food safety interventions in informal markets in a gradual, step-wise manner to prevent driving the informal markets underground.
- Organize actors in informal markets into associations to facilitate training on food safety.
- Governments should invest in infrastructure development in informal markets (water, electricity, toilets and waste management) and encourage the actors to embrace food safety through incentives rather than by penalties and harassment.
- Universities and other institutions of higher learning should develop a training curriculum on food safety in informal markets to contribute towards providing much needed evidence to guide the improvement of informal markets.





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