Fufu For Thought – Ghana

One of the fascinating aspects of urban social life in Ghana is the widespread presence of street food vendors. Operating from strategic locations at most hours of the day and night, they serve customers with tasty foods and colourful beverages at affordable prices. Street vending is an activity that provides employment to many, while providing nutritious, inexpensive and ready-to-eat food to millions of workers. However, the informal nature of the industry sometimes allows for poor hygiene standards, making the consumption of street food a potentially hazardous source of nutrition, so projects have been introduced to improve the livelihoods of street food vendors and consumer health by increasing consumer and producer education on food safety.

The Emergence of Street Foods

The Food and Agriculture Association (FAO) defines street food as 'ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers especially in the street and other public places'. Before independence, the Ghanaian capital of Accra was sparsely populated and meals were prepared and eaten at the family or individual level. Food vending existed only in the form of food being prepared at home and sold on a take-away basis. Ghana’s independence in 1957 promoted industrial development and brought about new sources of employment. People began to work away from their homes and their traditional working environment. Those who could not carry food to their places of work had to be catered for. This led to cooked food, snacks and fruit being sold to customers by vendors. The street food industry
grew rapidly and food vendors can now be found around offices, factories, schools, markets, construction sites, beaches, lorry stations, commercial centres, and along almost every street of Accra. The industry has now been recognised as an informal sector of the economy.

Table 1: Examples of Ghanaian Street Foods

<table>
<thead>
<tr>
<th>Food</th>
<th>Description</th>
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<tbody>
<tr>
<td>Akpler, banku</td>
<td>Fermented maize dough dumplings</td>
</tr>
<tr>
<td>Fufu</td>
<td>Pounded cassava with plantain, cocoyam or yam</td>
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<tr>
<td>Gari</td>
<td>Fermented grated cassava meal</td>
</tr>
<tr>
<td>Kenkey</td>
<td>Fermented maize dough dumplings</td>
</tr>
<tr>
<td>Koko (porridge)</td>
<td>Fermented maize dough</td>
</tr>
<tr>
<td>Koose</td>
<td>Fried bean cake</td>
</tr>
<tr>
<td>Talia (home-made macaroni)</td>
<td>Extruded wheat flour</td>
</tr>
<tr>
<td>Waakye</td>
<td>Rice and beans</td>
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The role of the street food sector in the urbanisation process and the urban economy reflects the way of life and the survival strategies adopted in many African cities. The sector has become accepted as a phenomenon tied to urban growth. Accra currently has a resident population of about 3.5 million and an additional 1.5 million during the daytime. Many people rely on street foods as a main source of income, and/or as a source of nutrition.

- **Economic benefits of street food**
  Setting up as a street food vendor involves little investment and requires no special training other than domestic experience in preparing food. It is estimated that the sector employs over 60,000 people and has an annual turnover of over US$100 million, with annual profits of US$24 million. Street food operations sometimes involve the entire family in the procurement of raw materials, preparation and cooking of the meals.

- **Women’s livelihoods**
  The role of women in the sector is significant, as they control a large share of market activity and commodity trading. In Accra 94 per cent of the vendors are women and have minimal education; 75 per cent of vendors do not pay taxes, and most do not belong to vendors’ associations.

- **Nutritional benefits of street foods**
  Street foods have significant nutritional implications for consumers, particularly for middle and low-income sectors of the population, who depend on street foods for their main food intake. The nutritional value of street foods depends on the ingredients used and how they are prepared, stored and sold.
Keeping Food Safe

*Wash your hands*
Your hands can easily spread bacteria around the kitchen and onto food. This is why it is important to always wash your hands thoroughly with soap and water at each of these times:
- Before starting to prepare food
- After touching raw meat, including poultry
- After going to the toilet
- After touching the bin
- After touching pets
Dry your hands thoroughly, because if they are wet they will spread bacteria more easily.

*Separate raw meat and ready-to-eat food*
Raw meat contains harmful bacteria that can spread very easily to anything it touches, including other foods, worktops, chopping boards and knives. It is important to keep raw meat away from ready-to-eat foods, such as salad, fruit and bread. This is because these foods will not be cooked before they are eaten, so any bacteria that get onto the foods will not be killed.

To help stop bacteria from spreading, remember these things:
- Do not let raw meat touch other foods.
- Never prepare ready-to-eat food using a chopping board or knife that you have used to prepare raw meat, unless they have been washed thoroughly first.
- Always wash your hands thoroughly after touching raw meat and before you touch anything else.
- Always cover raw meat, and store it below other foods so that it cannot touch or drip onto them.

The Need for Hygienic Practices

The heavy dependence on street foods by Ghanaians requires that good quality raw materials be used and that the foods be prepared, handled and sold under hygienic conditions for the assurance of good health. There is a need to properly address the problems associated with street foods, especially safety concerns.

Stands are often crude structures, and running water may not be readily available. Toilets and washing facilities are sparse, and the washing of hands, utensils, and dishes is often done in buckets and bowls. Disinfection is rarely carried out, and insects and rodents are attracted to sites where there is no organised sewage disposal. Food is sometimes not adequately protected from flies and refrigeration is not often available.

Basic hygiene involves a few key precautions: ensuring that utensils and hands used to handle food are clean and dry, and separating raw and cooked foods. An
important issue is the availability, safety and affordability of water for consumption, cleaning plates, cutlery, etc. and hand-washing. Ingredients must be obtained from a reliable supplier.

At present vendors have little incentive to adhere to health and safety guidelines because many consumers do not associate food sold in unsanitary conditions with ill health. Education of consumers would enable them to be more aware of food quality, and if appropriate compel producers to sell safer foods.

### Highlighting the Risk

The livelihoods of those in the informal street food sector and the health of consumers could be jeopardised if food safety is not addressed. Reduced public confidence in street foods would not only jeopardise incomes of vendors but also of their employees, and of producers and traders of inputs. To address these issues, the Natural Resources Institute (NRI) in the UK and the Food Research Institute in Ghana have launched a project (funded by the Crop Post Harvest Programme of the UK’s Department for International Development – DFID) to develop food safety strategies and procedures through the reduction of food hazards in street-vended foods.

The broad objective of the project is to assess and prioritise the economic and social importance, and safety and quality constraints, of street-vended foods in peri-urban locations. The objective was achieved through:

- Selecting case study products and vendors on the basis of perceived risk, volume traded and importance to consumers of street-vended foods;
- Identifying supply chains for raw materials to the street vendor using informal survey techniques;
- Assessing the significance of street-vended products to the participants in the supply chain and the street vendors, and to the economy as a whole;
- Identifying the extent of hazards from heavy metals (for example, lead) and microbiological contamination in selected street foods in Accra.
- Finding ways of improving the safety of selected street vended foods that are economically viable and socially acceptable.
- Make recommendations that contribute to improving the safety of foods in the street food sector to policy makers and key stakeholders.

The project focuses on popularly consumed street foods (e.g. waakye, kenkey and fufu) in Accra. A key component is the identification of the types and levels of the heavy metal and microbiological hazards in street-vended foods. It is then possible to determine their sources, and develop strategies and procedures to reduce identified hazards to acceptable levels. These need to be economically and socially acceptable to both the street-food sector and consumers. The project ensures that recommendations and procedures will have an impact on target groups by having the policy, regulatory and enforcement agencies as well
as NGOs as coalition partners. These bodies are involved at all stages in the project to ensure the recommendations and technologies are appropriate.

The project developed a partnership between street food vendors, NGOs, local authorities, food standards authorities, research institutions and food laboratories. The members of the partnership worked jointly to develop ways of improving the livelihoods of street vendors and the health of consumers. The partnership explored the wider framework in which the policies, institutional linkages and food laws associated with street vending were implemented. They determined the sources and extent of food safety hazards that could jeopardise livelihoods and consumer health.

The research partnership developed strategies that could be used to control identified food safety hazards in an economical and socially acceptable manner. A food safety baseline study showed that the conditions for vending were generally poor but that there were variations in food hygiene standards between markets and vendors selling different food types. Microbiological studies indicated that fufu was more at risk than other foods. Analysis of heavy metal residues indicated that concentrations of lead in street foods were generally low and therefore not a concern.

The project developed promotional materials on food safety to educate both consumers and vendors. These included four TV documentaries and billboards (with funding from United Nations Industrial Development Organisation, or UNIDO), posters, and training manuals for Environmental Health Officers and street vendor NGOs. Nearly 3000 vendors were trained, although this falls substantially short of the estimated 60,000 vendors in Accra. A consumer survey of 530 consumers indicated that most consumers did not associate unsafe food with food-borne illnesses.

**Developing Safer Street Foods**

The hygiene of street-vended food can be improved if a sufficiently high proportion of vendors receive training in basic hygiene skills. Vendors and consumers need to be aware of hygienic, sanitary and technological aspects of street food vending and consumption. Training and education on these issues is carried out by the project to help street vendors integrate into the urban food supply chain in the safest way possible. It is not just the vendors who need educating; consumers who are aware of food hygiene and nutritional requirements become discriminating buyers and not only protect themselves and their families but also place pressure on vendors to practise good food handling and preparation.
‘We trained about 3000 food vendors within the Accra area. We train them in environmental sanitation, food hygiene, personal hygiene, nutrition, and business management – anything about dealing with food or water; and we issue a certificate of participation.’

Apraku, Ghana Caterers Association

To support improved hygiene practices, local people require access to clean water, proper disposal of sewage, regular refuse collection and a means of keeping food cool. There are many technologies that have a bearing on food safety. These include those for the storage of water, utensils for cooking, storing and selling food, the means of heating or cooling food, the means of serving food, the means of cleaning, the facilities for waste disposal, and the provision of toilet facilities. Even slight improvements in these technologies can go a long way towards better serving the needs of millions of people who depend upon street foods, whether as vendors or consumers.

The public, therefore, has a key role to play in the control of food hygiene in Ghana. By drawing attention to deficiencies and constructively supporting national food quality control systems, they can push for safer foods. Wherever there is consumer pressure, there is heightened awareness of food problems and the food industry is under pressure to make improvements. Women are involved in a wide range of food-producing activities and have the responsibility of providing for their household. As the majority of street vendors in Accra are women, they have a vital role in food safety. Their education in food hygiene, and
their application of such to street vending, will substantially increase street food health in Ghana.

The project, funded by the UK Department for International Development (DFID), has facilitated this process by successfully contributing to the development of new knowledge on food safety issues, how information is managed and shared between organisations and issues relating to how street vendors take up this new knowledge. It has also outlined the challenges that need to be addressed if this new knowledge is to be adapted successfully and in a sustainable way to improve the livelihoods of vendors and the health of consumers.

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