



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS



WORLD
HEALTH
ORGANIZATION

Agenda Item 8

CAF 05/5

FAO/WHO Regional Conference on Food Safety for Africa
Harare, Zimbabwe, 3-6 October 2005

**ASSURING FOOD SAFETY AND QUALITY IN SMALL
AND MEDIUM SIZE FOOD ENTERPRISES**
(Paper prepared by Botswana)

1. INTRODUCTION

1.1 Small and Medium Size Enterprises

There is no single, clear and widely accepted definition of Small and Medium Size Enterprises (SMEs); rather, definitions vary from country to country. These variations depend largely on the size of the economy, types and structure of businesses, and the levels of development. Indicators such as annual turnover (sales) and number of workers are generally used to categorize SMEs. The SMEs nomenclature is used to mean micro, small and medium enterprises and is sometimes referred to as Small and or Less Developed Businesses (SLDBs)¹ (FAO/WHO, 2005).

Within the food business sector in most countries, SMEs account for the highest proportion of the Gross Domestic Product (GDP) and are responsible for producing a large share of the food consumed in a country. SMEs provide a significant proportion of the total employment in the food sector and make a vital contribution to the economic well being of the community at the local level (FAO/WHO, 2005).

SMEs promote industrial and economic development through the utilization of local raw materials/resources and the production of intermediate goods, through appropriate technologies and traditional practices. SMEs contribute to the economies of many countries worldwide and provide opportunities for job creation and rural development. In countries with food insecure populations, SMEs can assist in maximizing the use of local produce and providing an important source of food.

The SME sector is extremely diversified. At one end of the spectrum is the micro-enterprise sector, often referred to as the informal sector, which is made up of entities employing one or two persons, including the owner (includes the street food sector). Small enterprises have a somewhat broader scope and many operate on a more structured basis. Some have established links with medium and large firms as their market for goods and services. Medium-size firms tend to have developed a more outward looking approach to market their products or services, often looking beyond their country's borders to seek new markets. They also may establish linkages with larger firms to create opportunities. In general however, SMEs cater for the local markets and are normally not involved in international trade.

¹ The term SLDB used here refers to businesses that because of their size, lack of technical expertise, economic resources, or the nature of their work, encounter difficulties in implementing HACCP in their food business. The term 'less developed business' refers to the status of the food safety management system and not to the number of staff or volume of production.

1.2 Food Safety Considerations

Food trade globalization, urbanization, lifestyle changes, international travel and advances in food technology have made the food production and distribution chain more complex, providing greater opportunities for food contamination from more diverse sources. Accordingly, food safety is an increasingly important public health issue with governments all over the world intensifying their efforts in this area. These efforts are in response to an increasing number of food safety problems and rising consumer concerns (WHO, 2001). Earlier approaches to ensuring food safety were based only on end product testing, which is no longer adequate to ensure food safety. This is now being replaced by a food safety management system approach that focuses on food hazard prevention throughout the food chain. This approach includes the application of Good Agricultural Practices (GAP)², Good Hygienic Practices (GHP)³ and Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Point (HACCP)⁴ systems, food safety management systems and traceability/recall systems. GAPs, GHPs and GMPs are considered as prerequisite systems or programmes (PRPs) for implementation of HACCP systems.

In many countries, SMEs represent a large proportion of food enterprises and are responsible for a large share of the food consumed in a country. Accordingly, they are often an important source of food-borne illness transmission (Walker *et al*, 2003). Furthermore, the informal sector represents a large number of food businesses, but in many countries they operate in poor hygienic conditions and lack adequate resources and technical expertise on how to better their situation. In some cases, this has led to the creation of special government policies/programmes to provide support to improving the safety of foods produced by SMEs.

Recognizing the aforesaid importance of SMEs and the challenges in food hygiene faced by this sector, the Codex Committee on Food Hygiene deliberated on the improvement of food hygiene for SMEs in a number of sessions. The 35th Session noted the positive experiences that had been acquired in some countries in implementing GHP and HACCP, based on industry developed sector-specific hygiene codes, the Codex General Principles of Food Hygiene and Codex Guidelines for the Application of HACCP; and recommended similar approaches for SMEs (CCFH, 2003).

2. ECONOMIC AND SOCIO-ECONOMIC IMPORTANCE OF SMALL AND MEDIUM FOOD ENTERPRISES

It is generally acknowledged that food SMEs have a vast array of important potential economic and social characteristics linked to them (Ntsika, 2000; SACOB, 1999; UN-ECE, 1994); these include:

- Generation of employment opportunities;
- Can act as a seed-bed for the development of entrepreneurial skills and innovation;
- Increase the competitiveness of the marketplace and curb the monopolistic positions of large enterprises;
- Contribution to national Gross Domestic Product (GDP);
- More equal economic opportunities in the economy;
- More flexible and adaptable to changing market demand and supply situations;

² More information on FAO's concept of GAPs and FAO's work in this area is available from http://www.fao.org/prods/GAP/gapindex_en.htm

³ More information on FAO's work related to GHPs, GMPs and HACCP, as well as a published training manual on the subject, is available from: http://www.fao.org/es/ESN/food/quality_haccp_en.stm

⁴ HACCP is defined as "A system which identifies, evaluates, and controls hazards which are significant for food safety." CAC, 2003.

- Optimal utilization of local raw materials;
- Promotion of traditional food production;
- Supply of nutritious and inexpensive foods;
- Provides social support for the underprivileged (informal sector);
- Important role in sustainable food security;
- Promotion of economic development in rural centres, limiting rural/urban migration;
- Promotion of local agricultural food production, distribution and trade;
- Act as sub-contractors to larger corporations in the economy;
- Activities result in a multiplier effect in the socio-economic activities in the economy; and
- Can serve as the point of entry to big business in the economy: many multi-national organizations grew from SMEs.

Many countries have acknowledged that SMEs are crucial for industrial restructuring, social and economic development and have formulated national SME policies and programmes to stimulate their growth and competitiveness.

For example, the implementation of the Small, Medium and Micro Enterprises (SMMEs) Policy (SMMEs, 1999) and legislation (Small Business Act, 2004) in Botswana has established and mandated a number of agencies to financially and technically assist SMEs. In South Africa, the implementation of the National Small Business Strategy (White Paper; 1995), the National Small Business Act (1996), and other policies have provided a favourable environment for the development and expansion of SMEs, particularly among disadvantaged groups. Similarly, the implementation of an SMEs policy in Tanzania (SME, 2002) provided for the establishment and strengthening of a number of institutions to assist SMEs, with special emphasis on businesses in the food sector operated by women. Zimbabwe has a Ministry of Small to Medium Enterprises that is specifically intended to promote and assist SMEs. Similar developments have taken place in many other countries in the region and elsewhere.

As previously discussed, the term “SMEs” is used to mean micro, small and medium enterprises. Different countries use various measures of size depending on their level of development. The commonly used indicators are total number of employees, total investment and sales turnover; for instance:

- a) In Botswana SMEs are classified as (SMMEs, 1999):
 - i) Micro-enterprises: Less than 6 workers including the owner;
 - ii) Small enterprises: Less than 25 employees and an annual turnover of between Pula 60 000 and 1.5 million (1US\$= approximately 5 Pula);
 - iii) Medium enterprises: Less than 100 employees and an annual turnover of between 1.5 million and 5 million Pula.
- b) Tanzania defines SMEs as follows (SME, 2002):
 - i) Micro enterprise: 1– 4 workers and capital investment of up to 5 million Tanzania shillings (Tshs.) (1US\$= approximately 1 050 Tanzania shillings);
 - ii) Small enterprise: 5– 49 workers and capital investment from 5 million to 200 million TShs;
 - iii) Medium enterprise: 50– 99 workers and capital investment from 200 million to 800 million;
 - iv) In the event of an enterprise falling under more than one category, then the level of investment is the deciding factor.

- c) The South African National Small Business Act defines five categories of SMEs (Table 1) i.e.:
- i) Survivalist enterprise: The income generated is less than the minimum income standard (below the poverty line). This category is considered pre-entrepreneurial, and includes hawkers, vendors and subsistence farmers. (In practice, survivalist enterprises are often categorized as part of the micro-enterprise sector.)
 - ii) Micro enterprise: The turnover is less than the VAT registration limit (that is, R150 000 per year). These enterprises usually lack formality in terms of registration. They include, for example, *spaza* shops, minibus taxis and household industries. They employ no more than five people.
 - iii) Very small enterprise: These are enterprises employing fewer than 10 paid employees, except mining, electricity, manufacturing and construction sectors, in which the figure is 20 employees. These enterprises operate in the formal market and have access to technology.
 - iv) Small enterprise: The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practices.
 - v) Medium enterprise: The maximum number of employees is 100, or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterized by the decentralization of power to an additional management layer.

Table 1: Definition of SMEs in South Africa as given in the National Small Business Act.
(IUS\$ = 7 Rand)

Enterprise size	Number of employees	Annual turnover	Gross assets, excluding fixed property
Medium	Fewer than 100 to 200, depending on industry	Less than R 4 million to 150 million, depending upon industry	Less than R 2 million to R 18 million, depending on industry
Small	Fewer than 50	Less than R 2 million to R 25 million, depending on industry	Less than R 2 million to R 4.5 million, depending on industry
Very small	Fewer than 10 to 20, depending on industry	Less than R 200 000 to R 500 000, depending on industry	Less than 150 000 to R 500 000, depending on industry
Micro	Fewer than 5	Less than R 150 000	Less than 100 000

The street food sector is very much a part of the informal sector of SMEs. It is growing rapidly all over the world, providing employment to millions. It can also provide fresh, low cost, nutritious and tasty foods. Street foods also provide a variety of traditional foods. Apart from providing a social support system for the under-privileged, street foods have a major impact on local agricultural food production, distribution and trade. The importance and challenges assuring food safety and quality in the street food sector are discussed in detail in CAF 05/4.

3. APPLICATION OF APPROPRIATE QUALITY ASSURANCE SCHEMES IN FOOD SMEs

There are two distinct but inter-related aspects of food quality assurance schemes that are of concern to the food producer/processor. The first approaches quality in terms of conformity to certain market requirements, such as perceptible superiority of desirable attributes or characteristics such as size, colour or organoleptic properties. The second approaches quality as a being synonymous to food safety,

which requires that the food is free from unacceptable levels of physical, chemical and microbiological hazards. In many countries, the government focuses more of its resources on the safety aspects of food quality in the interests of consumer protection, trade facilitation and preservation of the national reputation as a supplier of safe foods. This assumes that the food producer ensures adequate controls for the quality attributes of the food.

In general, SMEs may lack adequate skilled personnel and knowledge of methods of improving food safety. Improper food handling and storage practices, poor hygiene, limited access to a safe potable water supply, poor quality of raw materials, unsuitable production environments and problems of garbage disposal and pests are some of the many public health concerns facing food producing SMEs.

3.1 Traditional quality control

The traditional quality control programmes in food were based on establishing effective hygiene controls. Confirmation of food safety and identification of potential problems were usually obtained by end-product testing. Very often this has been the only quality and safety assurance system applied. Problems related to this procedure include (Huss *et al*, 2004).:

- High cost implications of well equipped laboratories and well trained personnel. The running costs of such laboratories are also high, as well as the cost of products "lost" in destructive testing;
- Retrospective results (it may take several days before results from end-product testing are available); all production cost and expenses have already been incurred if any hazards are identified in the end-product testing.
- The chances of finding a hazard will be variable, but most often very low. Nevertheless, the hard work of sampling and testing will give a sensation of "being in control" and create a strong, but false sense of security.
- There is no test that will always give an absolutely accurate result with no false positives and no false negatives.

Food safety management systems have evolved from these traditional methods with a major shift towards preventive control systems where the main responsibility for food quality and safety lies with the food businesses. Apart from ensuring compliance with national food legislation, the role of governments should be to assist SMEs in implementing food safety management systems, particularly GHPs. Government should also provide a supporting role in terms of information dissemination and training so that the SMEs can take full responsibility in the safety of their food products. Accordingly, effective partnerships between government and food SMEs through trade and industry associations are especially important in this regard (FAO/WHO, 2005).

3.2 Modern approaches to food safety and quality systems

The best known systems for ensuring food safety are GAP/GHP/GMP and HACCP systems. The basic principles of these systems have also been adopted in other quality management systems addressing food safety.

3.2.1 GAP/GHP/GMP

GAP, GHP and GMP are measures that are required to produce safe food. These requirements are prerequisites to HACCP and are essential in all food businesses.

GAPs are basic food safety principles associated with minimizing biological, chemical and physical hazards at primary production stages. GHPs mandate that all persons working in direct contact with food, surfaces that food might contact and food packaging materials conform to sanitation and hygienic practices to the extent necessary to protect against contamination of food from direct or indirect sources.

Food legislation in many countries requires that a food business operator be responsible for the hygiene conditions in his food business. One of the key elements of GHPs is that food businesses assess their own standards and make decisions regarding the practices and procedures which ensure good food hygiene practices. Industry guides of good hygiene can be produced through the cooperation of the food industry and the Government, based on the Codex Recommended International Code of Practice for General Principles of Food Hygiene (CAC, 2003). Formulation of industry guides has the potential to incorporate the best of self and government regulation and should operate to the mutual benefit of both government and the industry.

For an industrial guide of good hygiene to be officially recognized, the industry may be expected to demonstrate that the guide (Holt and Benson, 2000):

- provides an appropriate definition of the sector to which it applies;
- provides guidance on compliance with all parts of the regulations relevant to the sector;
- has a justifiable technical basis;
- distinguishes clearly between guidance on compliance with legal food safety requirements and guidance related to good manufacturing practice or quality requirements;
- has been drawn up by a representative section of the industry sector affected, including SME representatives, in consultation with enforcement and consumer bodies; and
- has followed the format advised by the government.

3.2.2 HACCP

The Codex Hazard Analysis and Critical Control Point (HACCP) system is recognized worldwide as the foremost means of assuring food safety throughout the food chain, from primary production to final consumption, particularly when used in combination with the pre-requisite programmes (CAC, 2003).

HACCP is a systematic approach that identifies, evaluates, and controls hazards that are significant for food safety (CAC, 2003). HACCP ensures food safety through an approach that builds upon foundations provided by the pre-requisite programmes of GAP/GHP/GMP. It identifies the points in the food production process that require constant control and monitoring to make sure the process stays within identified limits. The approach set out by Codex is applicable throughout the food chain.

Codex-based HACCP has become a requirement for international food trade; however, it is not a panacea for all food safety problems. It must be integrated with effective pre-requisite programmes. The combination of GAP/GHP/GMP and HACCP is particularly beneficial in that the effective application of GAP/GHP/GMP allows the HACCP system to focus on the true critical determinants of food safety. Food business (including SMEs) can demonstrate a systems-based approach to assuring food safety and quality by implementing a HACCP based approach.

HACCP based systems: The Codex General Guidelines for HACCP allow flexibility in interpreting its methodology, provided they are underpinned by all the 7 HACCP principles. Alternative methods, often referred to as *HACCP Based Approaches* (OMAF, 2004) may be the most useful way to facilitate HACCP implementation in SMEs. If national governments decide to develop HACCP based approaches, it is important that they first pilot such programmes before full implementation.

Generic HACCP based plans: Generic HACCP based plans have been generated by some governments and other stakeholders as a means of helping SMEs to implement HACCP. This approach aims to produce a pre-developed general HACCP plan that will be further tailored and adapted by the individual food business (WHO, 1999). Because these HACCP-based systems do not look like traditionally developed HACCP systems, it is essential that governments are involved in the development of such programmes. This is particularly important where HACCP is mandatory because enforcement officers may not recognize the system as compliant with the legislation.

Due to the many barriers facing SMEs in fully implementing the Codex HACCP system (CCFH, 2003; FAO/WHO, 2005; Jirathana, 1998; Taylor, 2001; Taylor and Kane 2004), many other approaches have also been successfully implemented. In developing other approaches, it is important that public health is not compromised, that there is sufficient ownership and dialogue with stakeholders and that the approach is appropriate to the national food businesses that will be applying the approach.

3.2.3 ISO Quality Management Standards

The best known International Organization for Standardization (ISO) standard for quality assurance is ISO 9000. The ISO 9001:2000 is an ISO 9000 standard whose requirements can be certified by an external agency and replaces the old ISO 9001, 9002 and 9003 standards with one standard (Huss *et al*, 2004).

Compliance with ISO 9001:2000 provides assurance to a customer that the company has developed procedures (and adheres to them) for all aspects of the company's business. It can assure quality of products but does not necessarily provide for food safety, except when the system is combined with food safety management systems such as GHP and HACCP. To address this shortfall, ISO is now finalizing ISO standard 22000:2005- *Food Safety management systems – Requirements throughout the food chain*, which combines Codex HACCP principles with pre-requisite programmes. Another document, *ISO 22004*, is also under preparation to provide guidance on the application of ISO 22000, including guidance for SMEs and developing countries (ISO, 2005). These new ISO standards are intended to contribute to a better understanding of Codex HACCP and not to add to the list of barriers or confusion for SMEs on GHP/HACCP implementation.

4. CONTROLLING OF FOOD SAFETY AND QUALITY IN SMEs

Food safety management systems based on the principles of GHP/HACCP have been recognized worldwide as essential management tools to enhance food safety and prevent cases of food-borne diseases. GHP/HACCP principles are now the requirements for major food export markets and trans-national supermarkets. However, many SMEs worldwide are faced with a low level of GHP/HACCP uptake due to a myriad of barriers. Promotion of food safety management systems in SMEs therefore requires a logical approach to address barriers and to explain to SMEs, the government and consumers the clear benefits of these systems. Such initiatives depend very much on cultural, economic, organizational and geographical factors, which vary for every country.

4.1 Benefits of GHP/HACCP

There are clear benefits of implementing GHP/HACCP for government, food enterprises and consumers alike. The following are some of the projected benefits that should encourage businesses and governments to implement GHP/HACCP (Jirathana, 1998; OMAF, 2004; Taylor 2000 & WHO, 1999).

Benefits to consumers:

- Reduced risk of food-borne diseases
- Increased food safety awareness
- Increased confidence in the food supply
- Improved quality of life (health and socio-economic)

Benefits to food enterprises

- Increased consumer and government confidence
- Higher assurance of safe food
- Reduced legal and insurance costs
- Increased market access
- Reduction in production costs (reduced recall and wastage of food)
- Improved product consistency
- Improved staff and management commitment to food safety
- Decreased business risk

Benefits to governments

- Improved public health
- Improved food security
- More efficient and targeted food control
- Reduced public health costs
- Trade facilitation
- Increased confidence of the community in the food supply

4.2 Overview of obstacles to apply food safety management systems in SMEs

Changing to preventive, risk based systems based on GHP and HACCP, with a shift in responsibilities for food businesses and government agencies has not come without some difficulties. Anticipating and mitigating these difficulties will be critical in building a successful science based system. These difficulties range in chronology from prior to GHP/HACCP implementation, during the process of implementation and after the HACCP systems have been implemented. Barriers to HACCP implementation in SMEs are well documented (Jirathana, P, 1998; OMAF, 2004; Taylor E, 2000; WHO, 1999; CCFH, 2003) they include:

Internal obstacles within SMEs:

- a) Inadequate basic food hygiene;
- b) Lack of expertise and information;
- c) Human resources constraints;
- d) Inadequate infrastructure and facilities; and
- e) Perceived and real financial constraints.

External obstacles

- a) Insufficient government infrastructure and commitment;
- b) Absence of legal requirement (for GHPs or HACCP);
- c) Lack of business awareness and positive attitude of industry and trade associations;
- d) Lack of customer awareness of or demand for GHPs/ HACCP;
- e) Lack of effective education and training programmes;
- f) No expertise, information and technical support made available to SMEs; and
- g) Inadequate communications.

4.3 Implementation of food quality/safety management systems

Government commitment and support for and partnership with the industry and trade associations are probably the most important factors in food quality management systems development, as demonstrated by a number of countries that have successfully implemented GHP/HACCP (OMAF, 2004). The food industry has the responsibility to put in place systems to ensure the production of high quality, safe food. However once the systems are in place, the government task is to audit the systems for compliance (FAO/WHO, 2005).

The following elements are considered important for comprehensive implementation of food safety management systems:

- a) National Food Safety Policy;
- b) Food safety/quality management system strategy (GHP/HACCP);
- c) Activities to facilitate implementation of food quality management system strategy in SMEs.

4.3.1 National Food Safety Policy

Governments are charged with the protection of public health and also with driving economic development. Improvements in food safety can have a positive effect on both of these issues. Implementation requires participation from several relevant government departments and other key stakeholders. Therefore, it is important that a government led national policy on food safety is adopted. It is necessary that any activity regarding food quality management systems is taken as part of this coherent inter-departmental and multi-disciplinary approach with full stakeholder involvement.

4.3.2 Strategies for implementation of food safety and quality management systems in SMEs

Given the obstacles facing the implementation of GHP/HACCP in SMEs, it is evident that many activities will need to be implemented on many different fronts. For these activities to deliver the desired goals of the food safety policy, it is necessary to organize them in the most efficient and effective manner, which is best achieved by developing a coordinated strategy. The key to facilitating GHP/HACCP implementation in SMEs is the development of a strategy which enables the national policy on food safety to be realized.

The following is a logical sequence of steps to be followed to successfully develop such a strategy (FAO/WHO, 2005):

- 1) Gather information;
- 2) Define the obstacles and identify their causes;
- 3) Develop and select possible solutions;
- 4) Draft strategy and consult widely;
- 5) Conduct an assessment of the potential impact of the strategy;
- 6) Modify and publish the strategy; and
- 7) Implement the strategy (including monitoring of results and feedback).

4.3.3 Activities to facilitate food safety and quality management system implementation in SMEs

Once the strategy is in place a number of support mechanisms will have to be developed in preparation for its implementation. They include, but are not limited to the following (FAO/WHO, 2005):

- Financial support (e.g. for training, development of plans etc);
- Guidance and explanatory information (e.g. manuals, booklets, leaflets and videos);
- Implementation training programmes and manuals;
- Generic food quality management system models;
- Pilot scale projects (for demonstration to SMEs);
- Sample Hazard Analyses;
- Recognition auditor training;
- Voluntary schemes;
- Mandatory provisions and enforcement (laws and regulations); and
- Provision for technical expertise (e.g. consultants).

The selection of the various elements of a national food safety management system to implement needs to be made at a national level to match national needs.

4.4 Case studies on approaches to food safety management systems

Globally, the approaches taken with respect to HACCP vary considerably. Some countries have integrated the requirement for HACCP or HACCP based systems into their food laws. Other countries have maintained the implementation of HACCP as voluntary, while still other countries have utilized a staged approach to HACCP, starting with voluntary GHP/HACCP and subsequently moving to mandatory HACCP (FAO/WHO,2005; OMAF, 2004). In all cases, the important role of GAPs, GHPs and GMPs is stressed.

The UK is an example of a country where a HACCP based system, at minimum, is required and exists as part of the country's food laws. The UK, along with other members of the EU, is now required to comply with regulation DIR 93/43/EEC (2003) throughout all aspects of the food continuum except primary production. This directive requires that food business operators ensure that adequate safety procedures are implemented, maintained and reviewed on the basis of HACCP.

Many member states in the EU used a staged approach to implementing HACCP which allowed considerable time for the transition from a prescriptive, inspection-based food safety system to an outcome-based HACCP system. During this transition phase, both systems were supported but the focus was on the transition to the newer system.

In the U.S., HACCP is now mandatory only in meat, poultry, and seafood plants. Countries such as Canada, Australia and New Zealand began with a system of voluntary HACCP and are moving to mandatory HACCP. The South African regulations relating to HACCP application in food enterprises (RSA/HACCP, 2003) provide an enabling framework for mandatory implementation of HACCP, including in street food vending.

SMEs in all these countries have not incorporated HACCP systems to the same degree as the larger facilities, due to the many obstacles faced. However, it is agreed that food safety and quality is important and that there is a need to improve levels of hygiene and a systems approach to food production – but that added support is required to do so.

The pressure from the food importing countries is a major factor for HACCP implementation in many other countries; otherwise for local markets, basic hygiene regulations are enforced to ensure food safety. Despite government support, there are many obstacles for SMEs to implement GAPs/GHPs/GMPs, which are the basic regulations that need to be implemented prior to a HACCP system.

Both approaches, mandatory and voluntary, present benefits and challenges. One of the benefits of mandatory food quality management systems is that it brings all food plants to an equivalent level with respect to food safety. One of the challenges with a mandatory system is encouraging industry ownership. As businesses tend to view the process as another government requirement, they may be more inclined to expect the regulatory authority to solve their problems when it comes to implementing and maintaining food quality management systems. One of the benefits of voluntary system is that enterprises are able to work through the development and implementation processes at their own pace. Because plants are choosing to implement the systems, they are more likely to want to do a good job of it. One of the disadvantages associated with voluntary food safety management systems is that the potential exists for high-risk facilities to operate without utilizing the best known systems for ensuring food safety.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions:

- Poor infrastructures and a lack of adequate facilities can seriously handicap food safety/quality management system application in SME. This is a critical area for government intervention.
- Consumer demand can be an important driving force for encouraging businesses to implement effective food quality management systems. Government and international organizations have an important role in educating consumers in this regard.
- SMEs often have inadequate manpower and expertise due to inadequate training of employees and a lack of management commitment and understanding of food safety and quality management systems. The lack of expertise is perpetuated by the absence of food safety in the curricula of professional schools.
- SMEs often lack the technical expertise required to implement food safety and quality management systems and therefore may need external support. The capacity of government and industry/trade associations to provide adequate technical support is a critical factor in the successful implementation of food quality management systems by SMEs.
- GHP and HACCP are considered as the benchmark systems to ensure food safety throughout the food chain. However there are many barriers facing SMEs in implementing HACCP; thus it may be premature for governments to enforce HACCP at this juncture. GHP application is a foundation for HACCP and for ensuring food safety and quality.
- As the full implementation of HACCP is quite detailed and requires various resources which are a challenge to SMEs worldwide, stakeholders in the African region should be promoting good hygiene practices as well as implementing other pre-requisite programmes. The primary aim should be to assist and sensitize SMEs in food hygiene matters to ensure safer food provisions, improved customer satisfaction and thus better business returns.
- Recognizing the difficulties facing SMEs, it is acknowledged that there is merit in applying HACCP based systems to improve food safety and quality where adequate support is available.

- Government commitment and raising the awareness of the food industry to the benefits of and the need for introducing GHP/HACCP are the most important factors in the development and implementation of a successful food quality management system initiative. The food industry and trade associations have an important role to play in promoting these initiatives in SMEs.

5.2 Recommendations

- i) Governments should develop and implement national food safety policies and strategies, including provisions to initiate and accelerate implementation of GHP and eventually HACCP in SMEs.
- ii) Implementation of the Codex General Principles of Food Hygiene, applicable codes of practices and relevant national food hygiene legislation should be promoted in food SMEs by both the Government and trade/industry associations. Appropriate national legislation should be drafted if needed.
- iii) Governments should initiate mentoring schemes for those enterprises that have successfully implemented GHP/HACCP principles to assist other SMEs develop and implement their own plans.
- iv) FAO, WHO and other development partners should provide technical assistance to support governments, trade and industry associations and SMEs in the implementation of GHPs and HACCP.
- v) Consumers groups should demand for improved food safety through the implementation of GHPs and/or HACCP.
- vi) Basic food hygiene, sanitation and GHP principles should be introduced and or strengthened in school curricula at all levels; the application of HACCP should be taught at professional schools for food sciences, catering and related disciplines.

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