

## Food Safety & Quality Management Systems – Outlook

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**Remya Sreedharan**

We all know that food is the basic necessity of life. There is a lot of awareness about food and nutrition but surprisingly there is very little awareness about food safety among the masses in spite of the fact that food safety is a vital part of the food industry.

Food safety is a scientific discipline describing handling, preparation and storage of food in ways that prevent food-borne illnesses and ensures no harm is caused to the end-consumer. Food safety practices in the food production chain help ensure that food quality and wholesomeness are maintained to promote good health.

Food safety is everyone's concern and it's difficult to find anyone who has not encountered an unpleasant moment of food-borne illness in their life. Food-borne illnesses may result from the consumption of food contaminated by microbial pathogens, toxic chemicals or radioactive materials. Ensuring food safety is becoming increasingly important in the context of changing food habits, popularisation of mass catering establishments and the globalisation of our food supply. There are many challenges in the enforcement of food safety regulations in many countries especially India, as a result of which instances of food adulteration and contamination occur.

Street food is a traditional and indigenous part of many countries which serves cheap and enjoyable food to millions of consumers, however the safety of this food is questionable. A survey conducted by WHO revealed that major health threat facing the public comes from raw and uncooked food, infected food handlers, water quality and inadequate hygiene measures in processing and storing of such food.

Proper food handling can prevent most food-borne illnesses and diseases. Follow five keys to safer food;

- Keep clean:
- Thoroughly wash raw fruits and vegetables with tap water.
- Keep clean hands, kitchen and chopping board all the time.
- Separate raw from cooked:
- Do not mix raw food and ready-to-eat food.
- Do not mix raw meat, fish and raw vegetables.
- Cook thoroughly: Thoroughly cook all meat, poultry and seafood, especially shellfish.
- Reheat all leftovers until they are steaming hot.

- Keep food at safe temperatures:
- Refrigerate cooked food within two hours of preparation.
- Never defrost food at room temperature. Defrost frozen food in the refrigerator, cold water or in the microwave.
- Use safe water and raw materials:
- Use safe drinking water for food preparation.
- Check use-by dates and labels while buying packed food.

### **Quality Management Systems**

Quality Management Systems are indispensable in each sector of the food industry, to ensure safe, quality food for the consumer. The number of businesses in the food industry which adopt QMS in order to enhance their competitiveness in the global market is continually rising. The most important Quality Management Systems in the food industry are as follows:

**The Global Food Safety Initiative:** It was launched in 2000, coordinated by CIES – The Food Business Forum, an association of the largest retailers worldwide. The mission of the GFSI is to continually advance food safety management systems, so as to gain the trust of the consumers in safe food delivery. The objectives of the initiative are: 1. To ensure consumer protection and to build up and maintain consumer trust, 2. To increase cost efficiency in the entire food supply chain through common acceptance of GFSI recognised standards by retailers worldwide, 3. To provide a unique international platform for networking and the exchange of knowledge, information and best food safety practices. The GFSI does not provide accreditation or certification (CIES, 2008).

**British Retail Consortium (BRC):** In 1998, the British Retail Consortium, an association of the largest British retailers (Tesco, Sainsbury, Asda, Morrisons, M&S, Lidl, Aldi, Iceland, Sainsbury, Somerfield, Safeway), published the BRC Food Technical Standard, a list of requirements suppliers had to comply with. This standard enabled retailers to fully meet their legal obligations regarding consumer protection. It also set up common criteria to control all companies supplying retailers with brand products, by requiring a plan for the implementation of HACCP, a documented Quality Management System and control of factory environment, products, processes and personnel. Finally, there is only one standard in Great Britain and consequently one certificate acknowledged by all retailers.

**International Food Standard (IFS):** In 1999, the association of German retailers, Bundesvereinigung Deutscher Handelsverbände (BDH), started developing a standard by which suppliers would be controlled for products with their labels (declarations), in an effort to provide a norm with a single assessment and control system. The content of the IFS is based on the BRC Standard and the structure on ISO 9001:2000. The IFS is in fact a list of requirements that businesses in the food industry have to fulfil in order to be certified.

**Safe Quality Food (SQF 2000):** The Australian government and several farmers' associations developed in 1995 a system which could control the entire agro-food chain, the Safe Quality Food System – SQF. It was later renamed SQF 2000. This standard is based on the requirements set by Codex Alimentarius and those of ISO 9000. Due to differences in size, processes and products and the impracticability of using a single standard for all businesses

in the food industry, several standards have been developed: SQF 1000 for primary production and smaller businesses, SQF 2000 for bigger food enterprises and SQF 3000 for retail and restaurants (Safe Quality Food Institute, 2008).

**HACCP Certification:** The initiative to develop a standard for certifying the Hazard Analysis and Critical Control Point system (HACCP) was launched by the Dutch food processing industry. The first version, 'Criteria for the assessment of an operation HACCP system,' was introduced in 1996. Six years later it was renamed 'Requirements for a HACCP-based food safety system.' The structure of the standard is based on the 7 basic principles and the 12 steps of HACCP, with additional requirements for a Quality Management System.

**ISO 22000:2005:** It was published in September 2005. It offers a practical framework for coordinating different requirements and norms in a single global standard. The standard encompasses requirements for prerequisite programmes, including good production practice, and the requirements for the implementation of HACCP and a quality management system. It also includes HACCP according to Codex Alimentarius, so that it can be easily applied in companies worldwide. Its objective is to establish a single food safety standard, applicable by any business in the food industry, by integrating the existent food quality and safety management systems, and thus to offer a firm basis for consumer trust. ISO 22000:2005 'Food safety management systems – requirements for any organisation in the food chain' can be used by different subjects in the food chain, from animal feed producers, plant and cattle breeders, to food manufacturers, transport and storage operators, retailers, to suppliers of additives and ingredients, food processors, producers of packages, chemicals, sanitary and other material.

These systems are applied in the quality assessment of all business subjects in the food industry, with the primary objective of protecting consumers and gaining their trust in safe food production and distribution. The adoption of food Quality Management Systems also gives businesses in the food industry the security and competitiveness they need in the market. Quality Management Systems keep up with market globalisation and are consequently applied as standards worldwide.