CERTIFICATION PROCESS, CERTIFICAITON INSTITUTIONS AND CRITERIA ABOUT PRACTICES OF THE FOOD SAFETY MANAGEMENT SYSTEM

Tülay Güzel

Çanakkale Onsekiz Mart University, Turkey

Yücel Taşkin

Food Safety Specialist, Turkey

Abstract: Food safety is the all precautions which are taken to eliminate the physical, chemical and biological damages. There are noteworthy factors in terms of human health and service quality in the all companies which produce food. There are private consulting institutions for companies which really attach important to public and human health in the presence of international standards and obligations. Being aware of the fact, several companies in Turkey carry out these processes by taking serious costs into consideration since they regard it as a necessity of being an outstanding brand. Besides, the increasing world population and the inversely proportional arable cultivated areas which are decreasing bring about some industrial interventions. These interventions are quite significant for both companies and consumers. While preferring safe food, they focus on the label on them, their logos approved by secure institutions and documents of management systems in the company. In a company which produces food, the practice of "The Food Safety Management System" causes consumers to think that company is able to produce the safe food. Since food safety dangers can occur during any phases of food chain, sufficient control in food chain is a fundamental necessity. The aim of ISO 22 000 is to ensure food safety and security within the Food Safety Management System. The main approach of the ISO 22 000 Standard is to practice a preventive system which keeps all the process within the food chain with its effects such as staff and equipment under control. This system has been developed for consumers in order not to be exposed to food borne diseases. In the institutions, The Food Safety Management System includes production control, product control, equipment control; maintenance and hygiene practices; hygiene of staff and visitors; transport, storage, product information; training, choosing and evaluating of supplier; communication and etc. The main objective is to ensure the product quality and consumers' healthy determining intolerable risks which can result from mistakes of process. Food security audits have a potential danger determinant and analyzer role in product, design, product and quality control. ISO 22 000 is not only about food security; but also it constitutes a fundamental and irreplaceable part of quality assurance in industrial production and service practices while increasing sensory and nutritious quality. In the Food Safety Management System, everyone is given responsibility during and after production; and a productive motivation is ensured with a more participation. Besides, local and global productivity is increased while utilizing resources more effectively and decreasing losses and this causes companies to have total quality management.

Keywords: food safety management system, certification process, certification institutations, food safety.

Food safety system

Food safety refers to the fact that food is produced in accordance with the aimed usage; when it is consumed by humans, it doesn't lead to any healthy problem or cause hesitation about being harmful to humans. The systems ensuring safety of food while producing and serving them are food safety systems. The term "food chain" within these systems means all of the various processing periods, from farm to fork. In short, all of the phases starting from farm which are "preparing, processing, producing, storing, transporting (if necessary) and serving it to customer (service) are called food chain.

The subject of food is so sensitive that it is not possible to reach the correct result if a part of produced products or services is analyzed. A more systematic method which includes all phases of production is required. Based on the requirement, Hazar Analysis and Critical Control Points (HACCP) has been designed.

When the issue acquired a broader dimension due to globalization, the International Standard Organization (ISO) determined the required standards to which businesses in food sector should conform to for safer and healthier food production in 2005 and it launched the system of ISO 22000 Food Safety Management.

Businesses in food sector would like to build the Food Safety Management System in their companies in order to prove the fact that they make production in accordance with hygiene conditions in each phase of production.

The Food Safety Management System is an international standard and was launched to form a safer food production chain worldwide. Objective of the system is to build an effective communication among productive businesses, consumers, suppliers, legal authorities and other related institutions; in this way food will be able to be monitorable in each phase. The system, which works for food safety in each phase within the food chain, includes also principles of HACCP

The principles of HACCP are based on only the production phase of food production. The HACCP Document is given only to businesses making production. It is not an ISO standard and not accredited in the international area. HACCP Documents lost their validities after the year 2006 and the businesses with the document have adopted the standards of the ISO 22000 Food Safety Management System.

The ISO 22000 Food Safety Management System is a whole of standards identifying activities such as conducting danger analysis about food, determining crucial control points, managing the related processes and generating a quality management system.

Thanks to these standards, it can be determined whether a business complies to all legal regulations related to food safety or not.

A business can obtain **the ISO 22000 Food Safety Management System Document** from a certification body when it builds the system in order to put its production activities in order. Since the document demonstrates that the business is able to make production at international standards, it is easier for the business to trade around the globe. Interest, trust and preference of consumers increase as the business brings safe food to consumers. Loss during production decreases. Quality of produced products and services increases measurably. Superiority of the business over rival ones also goes up. While choosing certification body, it could be better to choose the one with accreditation in accordance with customers and their target country.

In the phase of foundation, ISO 22000 Food Safety Management System is more challenging compared to other standards in terms of documentation studies and background studies. Obtaining the document is not obligatory; however, the prestige which it will bring to business is unquestionable.

A business should adapt certain fundamental criteria to its management systems if it would like to make production at the standards of ISO 22000. One of them is the HACCP standards. The HACCP Document has been invalidated with the new Food Safety Management System. However,

its standards are also among principles of the new system and it is obligatory to comply to these standards.

It is important to complete the followings in order to have the ISO 22000 Food Safety Management Systems Document:

1. Defining and evaluating threats
2. Taking the necessary precaution against dangerous situations
3. Defining all phases of food production including raw material, food additives, packaging materials contacting the product and the final product
4. Monitoring all successive circles of food chain
5. Planning processes for verification and improvement

Food sector businesses which have built the Food Safety Management System in their organizations will be allowed to apply to a certification body for the ISO 22000 Food Safety Management System Document after the system is run for at least three months. This period is important for the system which experiences implementation process and updates businesses.

Implementation Phases of the ISO 22000 Standard

Generating the Pre-Requirement Programs

Each business in food sector needs to fulfill the required fundamental conditions and practices for the sake of food safety. These fundamental activities form pre-requirement programs.

Businesses must take the following factors into account while fulfilling pre-requirement conditions (TS EN ISO 22000, 2005, TST EN 22002- 1, 2011).

1. Structures of buildings and the related auxiliary facilities, working area and locations and order of social areas
2. Supplying water, air, energy and utilities
3. Supporting services including waste and sewage systems
4. Convenience of equipment, their correct positioning and cleaning for maintenance and preventive maintenance
5. Managing purchasing materials, utilities, waste and product controls
6. Precautions against cross contamination
7. Cleaning and sanitation
8. Insect control
9. Staff hygiene
10. Training
11. Tools

From the practices which are often encountered during food safety audits and can put food safety at risk:

Cold and storing in deep-freeze

– Increase in midpoint temperature of products due to high temperature of cold/deep-freezed unit and this leads to undesirable reproduction.

– Storing raw food (Meat, chicken, fish, egg) with food consumed without heat-process in the same area leads to cross contamination and to contamination of the high-risked bacteria of raw food to other ones.

Cooling Process

The undesirable reproduction of microorganisms on products since cooling process is performed either for insufficient time or for too long time. The most ideal solution is to purchase rapid cooling cabins. Cooling should never be performed at ambient temperature of production area.

Large pieces of meat need to be cooled after being portioned. When they are cooled as a whole, it could lead to reproduction of microorganism and risk of food poison since inner parts of them can't be effectively cooled.

Labeling
– When staff gives label of the next day to product instead of its production date, this leads to one day extension of it shelf life. When taking very risky food into consideration, this could lead to reproduction of microorganisms.

– A product produced in a unit of kitchen can be transferred to café, lobby bar or other departments of hotels in order to be served to room service or/and direct consumption. Shelf life of such products (cheese products, deserts etc.) can't be followed since a second label (transfer date, storing date etc.) isn't given to product except for the first one for production date. Therefore, this could lead to food poisons.

Uneducated/Unconscious Staff (Or Sabotage)
– Leaving or forgetting cleaning chemicals in food production area

– While cleaning food production areas, contamination of cleaning chemicals in undefined chemical bottles or beverage bottles to food; or these liquids drunk by staff; or their usage for food production.

Equipment
– Preserving and storing with worn-out and etched equipment and chemical contamination risk

– Contamination due to uncontrolled equipment before used.

Document
– There are several feedbacks about the fact that tracking forms of food safety in several businesses are thrown to garbage a year later However, production records should be preserved for a longer time and archive system should be built.

– Documents are not readable and staff keeps fake records about food without analyzing food.