

IMPLEMENTATION OF THE ELEMENTS OF QUALITY AND SAFETY MANAGEMENT IN RAW MATERIAL PRODUCTION IN FOOD INDUSTRY

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Introduction

Upon entering the millennium, the players of the economy face a number of challenges. The liberalization of global trade has greatly contributed to the changes in economic and social conditions of food manufacturing and consumption.

All market players have had to understand that the world market has become the benchmark for all countries, for all products and services: the requirements of the world market should be met by the individual countries, the products and services should satisfy the needs and demands of the consumers in the global market and they should be sold at a price which is higher than their production costs and profitable. None of the existing quality assurance systems can meet all the expectations alone, as is indicated in the relevant literature.

For the implementation, complex, up-to-date business management systems and methods are required which enable business ventures to understand and adapt to the changes in the needs and demands in the world market in time.

Today most business ventures have realized that the improvement of the efficiency of their business management systems and methods is an economic "must", it is indispensable for their survival. They need management theories and methods which improve their efficiency to recognize and adapt to the fast and continuous changes in their economic environment. Those market players will win this competition who will be able to adapt to these inevitable changes consciously, faster and better than the others.

Due to the economic significance of food and its role in human life, creating proper conditions for the implementation of food safety in the entire food chain should be of primary importance for all societies. In addition, the conditions of environmentally-conscious food production should be paid bigger attention to. At the same time, safe

and healthy food production may bring benefits and additional advantages for business ventures.

Food safety in food chain

In the food chain (Figure 1.) – from primary raw material production to the consumer, that is „from farm to table” - three participants should co-operate in the implementation of food quality and safety legislations, claim prestigious experts (Pallaginé, 1999; Sósné, 2004; Bánáti – Popp, 2006). These participants are the following:

- Participants in food production and distribution (agriculture, food processing industry and food trade),
- Buyer, consumer (storage and food preparation in households),
- State control and supervision (the role of the government in the execution and setting up of legislations, decrees, supervisory agencies, requirements).

The basic quality criteria of food are determined by the quality criteria of agricultural production. Consequently, quality assurance systems should have been made common in the agriculture first. But the current situation is just the opposite, agriculture is substantially lagging behind the industry in terms of its quality assurance systems, and this gap is much bigger than it would be expected and justified in the light of the agricultural production procedures, the sizes of agricultural ventures and the ownership structure of agriculture (Berde 1999).

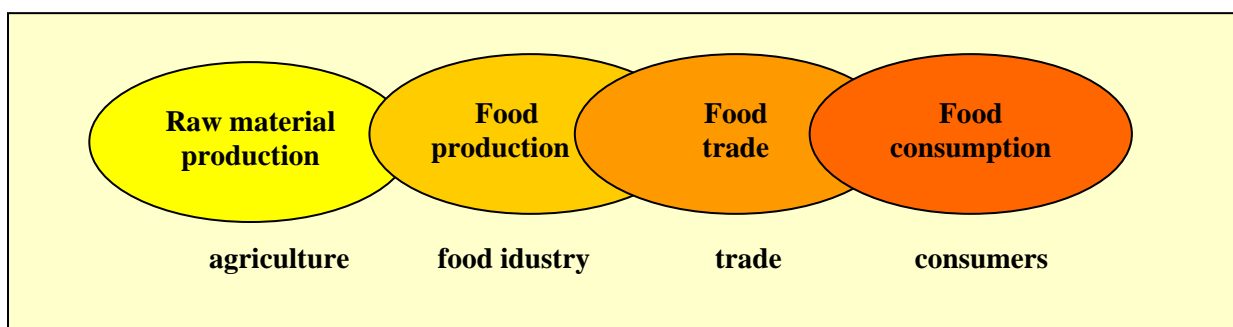


Figure 1.: Participants in food chain

Source: Pallaginé (1999)

Governmental regulations are generally enforced by governments through health supervisory agencies, who are also responsible for setting up the legal foundations of these regulations. The agencies formulate and enforce legislations, decrees, practical guidelines which ensure food safety and quality and which shall become binding for food producers (Bánáti – Lakner, 2002).

In the European Union, Act 178/2002/EC established the basis for a new type of food manufacturing, together with the related hygiene legislations, which should be enforced in food manufacturing and control:

- 852/2004/EC Act (April 29, 2004) on food hygiene,
- 853/2004/EC Act (April 29, 2004) on special hygiene rules for food of animal origin,
- 854/2004/EC Act (April 29, 2004) on agency control of products of animal origin intended for human consumption,
- 882/2004/EC Act (April 29, 2004) on feed and food legislation, and on the control of the implementation of the requirements in animal health care and decent animal treatment.

Act 178/2002/EC was passed by the European Parliament and Council as of January 28th 2002, and it is sometimes referred to as the EU food law. Its main stipulations are as follows:

(28) „Experience has shown that the functioning of the internal market in food or feed can be jeopardised where it is impossible to trace food and feed. It is therefore necessary to establish a comprehensive system of traceability within food and feed businesses so that targeted and accurate withdrawals can be undertaken or information given to consumers or control officials, thereby avoiding the potential for unnecessary wider disruption in the event of food safety problems”.

The aforementioned legislations and the legislations of the related fields are central in the legal regulation of food production. In the international legislations and EU-directives it is obvious that the raw material for food manufacturing and processing is responsible for food safety. The raw material for food manufacturing and the process of food processing should guarantee safe food consumption.

To meet these expectations and requirements, manufacturers and the processing industry should apply and enforce the required rules of Good Manufacturing Practice

(GMP) and Good Hygiene Practice. An internal controlling system should be set up in all phases of production, processing and the food chain, and consequently, greater responsibility should be allocated to the internal controlling system of food manufacturing, processing and distribution, that is to the Hazard Analysis Critical Control Points (HACCP).

This is a system which is approved and recommended on an international level, it has a valid legal background throughout Europe so it does not only provide food safety for a particular member state consumer community but also facilitates the sale of the foodstuff abroad.

International and national standards and regulations controlling food safety

From the internationally accepted and approved system standards which regulate the controlling activities of basic quality control and food safety processes in the production and processing of base materials in the food industry we can highlight the following:

- HACCP: Hazard Analysis Critical Control Points – for organizations producing and distributing foodstuffs.
- ISO 9001: International Standardizing Organization –a standard designed for the development of the Quality Control System.
- ISO 22000: International Standardizing Organization- a standard designed for the development of the food safety control system.

The regulations of the HACCP food safety system were designed by the Codex Alimentarius Committee and are accepted and implemented as part of their own national regulations by each country involved.

Some EU member states – Britain, France, Belgium, Germany – as a unique means of market protection introduced distinct national food safety regulations, which means that the products of only those food industry enterprises can enter their markets which can certify that they implement the particular national regulations. These regulations have been introduced mainly to certify the food safety conditions of those foodstuffs which are distributed by trade networks under their own trade name but are produced by external suppliers.(Szabó et al., 2006)

- IFS: International Food Standard

- BRC: British Retailer Consortium

Those enterprises which plan to enter the German, French and British markets simultaneously, or –as in most cases- wish to be suppliers for several food distributor chains in the above mentioned countries at the same time, are in a difficult situation nowadays.

Different standards mean different interests in the countries involved and a system of mutual tolerance has not been worked out yet.

There is a genuine chain of interests attached to the IFS standard and its certification, the certification service is a business in itself and has become a scene of competition in Europe.

A solution may be to work out a certification service of „one audit-more standards-more certificates”, as e.g the content (company background) of IFS and BCR audits is nearly the same. The assessment time is doubled only by the different assessment, different mode of report, i.e. with approx. „one and a half” audits we can go two ways. A „standard-proof” system should not be complicated: it should comply with anything that may come up in the national (European) regulations, BRC standard and IFS standard.

The one and only aim of these national regulations is to serve as a market protection tool on the food market of the particular nation, i.e. only the products of those companies can enter the market which implement the above mentioned national regulations in their controlling system, thus voting confidence for the particular product and its producer. These regulations – unlike ISO standards –contain more details and are strictly trade specific, thus introducing them is less complicated, the requirements are worded in a simpler way and thus they are easier to understand.

The disadvantage of these systems is that in Hungary there are very few authorised organizations and the number of staff in charge of certification is also very low, this is because the competences required for the certification of these systems are very high, and also the countries involved send their own auditors in the first place.

The standard unified and approved on an international level is ISO 22000. This standard is trade specific, focuses specifically on the peculiarities of production in food industry and also combines the requirements of HACCP and ISO 9001. Hopefully more and more enterprises in food industry will learn about and accept the advantages of this standard, as by using this standard they can give up HACCP and

ISO 9001. The enterprise applying this system can simultaneously obtain a well-structured HACCP food safety and an ISO 9001 quality control system, having in view the peculiarities of food industry.

The methodology of providing and certifying the conditions of labour safety and health protection

In economically developed countries health and safety protection is legally controlled. This is one of the most standardized areas of the EU. The EU provides clear directives for health and safety protection problems and also prevention and the member states are legally obliged to accept and implement these directives.

Due to this, this subject must be raised to a legal level and a proper institutional background be provided to control the compliance with the regulations. (Anwar et al., 2004)

Enterprises must strive to include quality, environmental protection and labour safety in their strategic planning processes and board members must take full responsibility so that it is possible to meet customer demands and at the same time prevent workplace accidents, breakdowns and environmental pollution resulting in natural catastrophes.

In recent years several systems have been devised to reduce workplace accidents and pertaining expenses (Morvay, 2002) Since the mid-1990s several international organizations (with ISO among them) and also food industry have turned their attention to the development of the Occupational Health and Safety Management System (OHSMS). There have been more than 20 system specifications of this kind. Among them the most widely applied two systems are BS 8800 produced by the British Standard Institute (BSI) and the American OHSAS 18001. BS 8800 includes directives helping to comply with the policy and aims of OHSMS and also how OHSMS can become an integrated part of the company control system.

The aim of this standard is to improve workplace health protection and safety performance of organizations, i.e.

- to minimize the risk of accidents for staff and others
- to increase trade performance
- to improve the image of the organization.

This standard includes directives of ISO 9001 and ISO 14001. The system strictly complies with the PDCA model, that is why it is easily adjustable to an integrated controlling system.

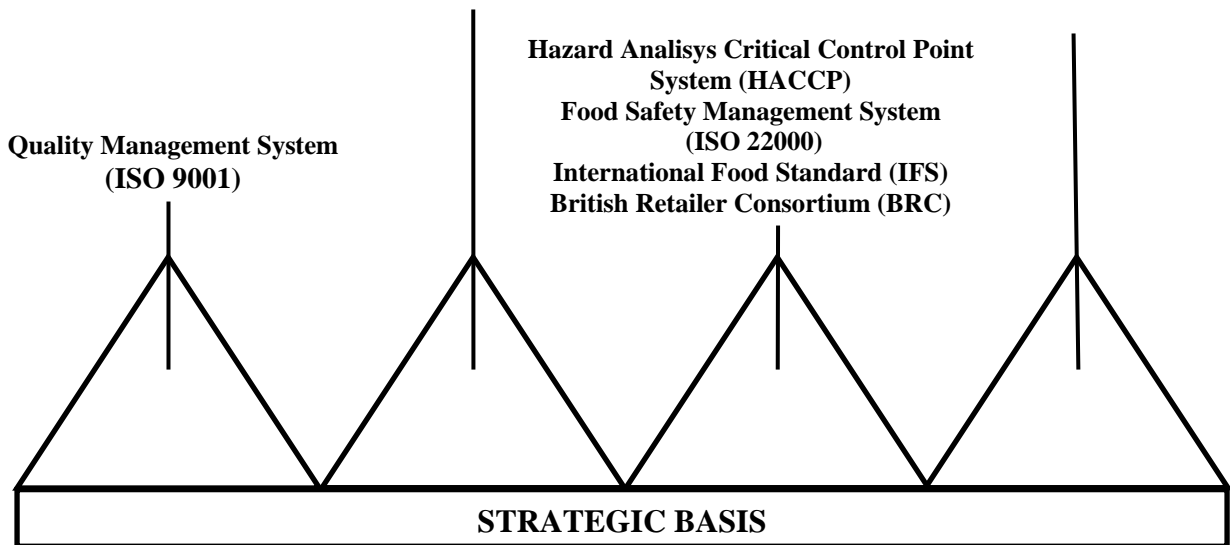
During the installation of the system prevention is emphasized most through the identification of dangers and the assessment and reduction of risks. The practical implementation of the workplace protection management system is of strategic importance. The first and most important step is to recognize how significantly this area influences the economic output, company morale and image.

Any of the elements of the integrated controlling system, when fitted in the company operation system, will increase its co-ordinated operation, its organization, meanwhile the introduction of OHSMS will lead to high level certified labour protection activities.

The integration of quality, safety and environmental management systems

The installation of different quality and safety management systems in the company strategic planning process can be seen in the pyramidal model in picture 2. During the strategic planning process an organization committed to quality will only be able to operate the company controlling system properly, if it recognizes the advantages derived from the integration of different controlling systems. The 4 sides of the pyramid – the superstructure – signify the standardized equivalents of different controlling systems, which can be fitted on the strategic basis, which is actually the very own strategic activity of the organization and thus gaining a great possibility to include them in the basic strategic activities of the enterprise.

SUPERSTRUCTURE



1. Figur: General model employ of Quality-, and Safety Management Systems in the food company

Source: Own survey

Environment Management System (ISO 14001)

Occupational Health and Safety Management System (BS 8800 - MSZ 28000)

Summary

Controlling systems set up within the framework of quality and safety management co-ordinate quality controlling activities and reinforce their prevention qualities. Different controlling systems can serve as management tools. Their aim is to co-ordinate the division of labour and labour processes, their reunion for the output and quality of the processes.

Different management areas structure and document those activities which, on one hand, influence the quality and safety of the product, and, on the other hand, supervise requirements of workplace health protection and labour safety. Actually they are part of the company management system, they define tasks and requirements connected to quality and safety.

One of the advantages of integrated controlling systems is that they can be recognized, evaluated and certified by a third party, and this certification represents a higher and higher value on the market and also increases the image of the organization. This is a system which is approved of and recommended on an international level, it has a valid legal background throughout Europe so it does not only provide food safety for a particular member state consumer community but also facilitates the sale of the foodstuff abroad.

International and national standards and measurements controlling food safety.

From the internationally accepted and approved system standards which regulate the controlling activities of basic quality control and food safety processes in the production and processing of base materials in the food industry we can highlight the following.