

Particularities of the Hygiene Management in food production

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Abstract The new legislative approach started by the publication of "The white book for food safety", followed by the appearance of "The new hygiene package" and of the regulations concerning its implementation.

In Romania, these changes manifested through the appearance of the Sanitary-Veterinary and Food Safety Authority and of the transpose of the communitarian acquires. The food processing industry in our country has begun the implementation of the communitarian requirements, the efforts made by each company, these being often doubled by those of the branch associations. The Authority has collaborated with the spokespersons of the food industry at some of the programs they carried out.

The papers intends to focus the attention on the specific features of the Romanian hygiene management in food production in the present economic and social context.

Keywords: Hygiene Management, food production, quality, Good Hygiene Practices - GHP.

1. Introduction

At the level of the European Commission, starting with January 2005, there have been existing new fundamentals for the whole food legislation. These are reflected in the Romanian legislation. Law no.150/2004 revised and with several modifications, limits the general principles and obligations, which the operators in the food domain must submit to. Starting from this base there has been constituted a package of regulations called "New Hygiene Package", applicable to al the levels of the food chain, which entered in use in January 2006 at the level of the European Community, respectively in 1 October in Romania. These regulations are:

- R CE nr. 852/2004 (food hygiene);
- R CE nr. 853/200 (animal origin foods hygiene);
- R CE nr. 854/2004 (official control of animal origin foods);
- R CE nr. 882-2004 (official control of foods and forages) [1].

2. Particularity regarding food safety

The communitarian legislation concerning foods and forages is based on the principles that the

operators, on all the production level, processing, depositing and distribution which are in their control domain, are responsible with insuring that the products and technological processes satisfy the requirements of the law for food and animal food safety, which are relevant for the activity they enterprise.

All the information regarding the application of the food safety management procedures must be permanently available for governmental control. This applies to the information important for a good traceability.

The Principles of the General Food Law are:

- Safety;
- Fairness;
- Responsibility;
- Transparency;
- Traceability;
- Retrieval;
- Collaboration [2].

3. Food Safety Management System

All the activities in the food field must have a documented food safety management system, appropriate to the size and character of the activity, which must be based on the HACCP principles –

Hazard Analysis. Critical Control Points. The operators must regularly identify and revise of their technological processes and must assure that in these points the control procedures are applied.

The operators with activity in the food field must demonstrate that they have a functional food safety management system, so they insure the production of foods or their safe selling. These systems must be based on the HACCP principles.

It will include the following elements [2, 3]:

- the identifying of the food safety hazards which are present or can appear in the activity;
- it must have implemented control procedures which will reduce to an acceptable level or will eliminate these hazards;
- must have clear procedures, which will be respected by the whole personnel;
- the records or documents must be in conformity with the activity made daily in the production units;
- must keep the records of the procedures and of the effectuated checking.

The personnel responsible with the food safety management system will have to be trained correspondingly.

The new regulations are supported by a Regulation regarding the microbiological criteria, like the CE Regulation nr. 2073/2005, which is being transposed. It will describe the allowed maximum levels for hazardous microorganisms (and products by associated metabolisms), as well as the obligations of the operators regarding the monitoring and actions, consequences of the results.

The unconditioned introduction of the HACCP system in the activities of production, processing and valorification of the animal products is extremely useful and efficient because [4]:

- No economic agent who produces food cannot permit and will not be able to verify his finished products' quality by 100%;
- The analyses regarding the quality are generally destructive analyses, situation which imposes the collection of samples which do not represent the analyzed stock by 100%;
- The incorrect sampling, the measuring limits of the used control machines and the human errors in what regards the results' reading together with other imperfections create conditions for

the products dangerous to the consumers to reach them.

4. The Hygiene Management

Currently, the insurance of hygiene in the food sector is based on specific regulations, among which, the most important are [1]:

- ★ *Governmental decisions nr. 924/2005*, which establishes the common requirements for all the operators in the food field.
- ★ *Governmental decision nr. 954/2005*, which adds the additional requirements for manufacturing of animal origin foods.

These regulations cover all the steps of the food chain, including the primary production (farmers, anglers and hunters) and impose the same hygiene requirements for the food import.

HG nr. 924/2005, which transposes the CE Regulation nr. 852/2004, establishes the hygiene requirements, as following:

- general hygiene requirements;
- structure requirements;
- transport requirements;
- equipment requirements;
- food wastes;
- water supply;
- personnel hygiene;
- cross contamination prevention;
- pest control;
- prime material control;
- labeling and packaging of food products;
- requirements regarding temperature control;
- food safety management system, based on the HACCP principles;
- the identifying and control of critical production points;
- training [4].

HG nr. 954/2005 which transposes CE Regulation nr. 853/2004, it establishes the additional requirements, as following:

- fresh meat (including wild game);
- crushed meat, meat foods;
- meat products;
- the delivery of animal fats;
- raw milk and milky products;

- eggs and egg products;
- living bi-valve mollusks;
- frog feet and snails;
- fish products;
- collagen;
- jelly;
- requirements regarding temperature control;
- Food Safety Management System, based on HACCP principles;
- the identifying and control of the critical production points;
- training;
- pest control;
- prime material control;
- the labeling and packaging of food products [4].

For the use of these Government Decisions, more precisely *HG nr. 924/2005* and *HG nr. 954/2005*, an activity in the food field is understood as being an activity, which acts in any enterprise, as being profitable or not, as being private or belonging to the state, which includes any steps of food production, processing, depositing and distribution.

There are included the primary producers, the importers, the en-gross, transporters, detail tradesmen, restaurant owners, suppliers, kiosks, mobile trailers and everyone who effectuate operations of food import, export, manipulation, depositing, transportation, preparation and selling.

“An operator with activity in the food field is any physical or juridical person who is responsible for the accomplishment of the requirements of the law in the food field in the enterprise with a food profile which is under its control” - Law no. 412/2004.

5. The Good Practices of Hygiene and Production

For the production of safe foods, the HACCP system must be developed on a solid base, constituted from preliminary programs. Each segment from the food industry must insure the conditions necessary for the protection of the foods while being under its control. This is usually made through the application of the Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP). These conditions and operating practices and now considered preliminary for the efficient

development and implementation of the HACCP program. These insure the operation environment necessary for the production of safe foods and proper for consumption. Beside the requirements specified by the law, the industry adopts several times practices and procedures specific to the production operations, which they make. The preliminary requirements have an impact for the safety of the foods, but they include and other factors necessary to the production of foods proper for consumption [5].

Together with the evolution of the HACCP concept, an increased importance is accorded to the insurance of a corresponding base from which to start the development of such a system. The expression “preliminary conditions” describes the array of programmes necessary for this purpose. If these conditions are not implemented and if they do not function effectively, the HACCP system can be inefficient. The preliminary conditions simplify the development and maintaining of a HACCP plan. As mentioned earlier, HACCP is axed on the activities, which have a direct and substantial impact on the foods' safety [4].

The existence and efficiency of the preliminary programmes must be evaluated at the same time with the elaboration and implementation of each HACCP plan. The preliminary conditions are established and administrated separately from the HACCP plan. Although, certain aspects of a preliminary programme can be incorporated in the HACCP system. For example, many companies have preventive maintenance procedures for the processing equipment, for avoiding its malfunction and the loss of production. In the course of developing of a HACCP plan, the HACCP team can decide that the maintenance and routine calibration, of a furnace for example, are going to be included in the plan as a verifying activity. Thus, it will insure the reaching in that furnace of a minimal temperature necessary for the safe production of foods.

Preliminary Programs or HACCP

The food safety management at the level of a company, which processes foods, imposes the use of GHP and GMP, together with the use of the HACCP system. The decision of including of a food safety management element in the frame of a preliminary

programme or in the frame of the HACCP system is a key point and needs the balancing of numerous factors.

The decision depends on the result of the risks analysis and the evaluating by the HACCP team of a potential hazard associated with danger.

The base difference between the preliminary programmes and elements covered by a HACCP plan are:

- the preliminary conditions and programmes can aim other aspects than the safety of the foods, while the HACCP plans are strictly for the production of safe foods;
- the preliminary programmes are general and can be applied to the level of the whole company, inclusively several production lines, while the HACCP are based on a risk analysis which is specific for a certain product and a certain production line;
- the deviations from an established limit in the frame of a HACCP plan necessarily determine an action, which will eliminate the risk represented by the product, due to the high hazard for public health [1,2].

Certain activities, which are normally included in the preliminary programmes, can be occasionally in the HACCP plan. For example, the hygiene procedures are generally included in the preliminary programmes, but certain producers can choose to include hygiene procedures as critical control point (CCP) in their HACCP system. This division will depend on the results of the hazard analysis and of the identifying by the HACCP team of the most efficient measures, which can be applied for the control of the specific hazards [3].

In regard of the preferences or the individual activities, the programmes will be made to correspond with the need of the company.

“The HACCP system is an instrument that helps the operators from the food industry so realize a higher food safety standard. The HACCP system must not be regarded as an auto-reglementation modality and it will not replace the official control”[1].

The implementation and efficient functioning of the HACCP system, respectively of the Hygiene Management System, present together with those mentioned above, a series of advantages:

- Is a component part of the quality management system;
- Is a preemptive method of assuring the foods' innocuity;
- Contributes to the lowering of non-conform products and of the clients' complaints;
- Represents a method of resisting the always increasing competition, manifested on the market;
- Contributes to the improvement of the firm's image and of its credibility on international markets, as well as in front of potential investors;
- Demonstrated the conformity with the current law;
- Raises the clients' and the company's employees' trust, in its capacity to realize exclusively products safe for consumption, in a constant manner [1,6].

6. Conclusions

Benefits brought by the Hygienically Management and the HACCP system application to the processor are:

- The systematic mode will insure the control of all the factors on which the food safety and that of the corrective actions necessary in the case of incidents are dependent.
- The mode which presumes the planning of activities permits that the possible hazards are anticipated and avoided or, in the case in which the succumb, rapidly resolved and with low costs
- Taken in consideration the most important steps in the frame of the production process to realize an efficient food safety, economic and with the optimization of the use of personnel resources.
- The correct and complete records are evidence of an efficient food safety management
- The production personnel is motivated by the recognizing of their efforts in maintaining food safety;
- Because HACCP is a system of food safety management, which is internationally recognized, the clients of the company can ask its implementation.

This last aspect is one of the most import, because trust is for any firm, the most important capital, without which nothing can be realized. To put it in another manner, any company which will “sell” its product or service and “trust” will

determine the client's comeback, who will truly appreciate the quality and innocuity of that food.

7. References

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