THE EFFECTS OF THE INTRODUCTION OF QUALITY ASSURANCE SYSTEMS ON THE ORGANISATIONAL STRUCTURE OF POULTRY PROCESSING COMPANIES

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SUMMARY

There are different standpoints concerning quality assurance in food industry companies. Some people say that GMP, GHP, HACCP systems control well enough the requirements to quality and hygiene, which are so important in food production. Others say that, beside these systems, there is a need for quality assurances systems including standards, beside the above mentioned items, in respect of the whole organisation, and environmental protection. To justify the above statement, it is expedient to supervise the systems established under ISO standards by an independent certifying organisation.

This was the reason for examining food industry companies, especially the poultry processing ones. In the course of research carried out in slaughterhouses of the north-eastern part of Hungary, the authors tried to find out if they pay enough attention to quality assurance and in which way they realise it within the organisation.

It could be established that the issue of quality assurance was on the agenda in all companies. The management of the companies has recognised the favourable opportunities deriving from the quality assurance systems, even though at the beginning workers did not like extra work involved, re-training, and the widening of their sphere of activity.

INTRODUCTION

According to the present approach to quality, management and organisation are the essential tools of quality assurance. This does not mean the lack of special standards in the field of quality management, but at present the new international systems (ISO, EN) identify perfect conditions excluding the possibility of any errors or defects in the management and organisation of production control instead of these standards. This approach is shown clearly by "The responsibility of the management", the first chapter of ISO 9001.

According to this principle the management plays an important role and has an outstanding responsibility in quality assurance. This role is complex and very diverse, it affects the establishment, development and operation of quality assurance systems, and covers all the fields of managerial roles and tasks.

First, the quality management strategies of the company have to be determined, and then an organisation for quality assurance has be established and implemented in the structure of the company, covering every particular of its continuous and effective operation. This is the task to be solved in every field of management, including strategic man-

agement, management of changes to take place (from motivation to conflict resolving), construction of the organisation, human resources management, and production management (Berde, 2000).

Any quality assurance system includes all the structures, methods, processes and resources serving for the establishment of quality management. It should be planned so that it meets all requirements to the management and control of the organisation. Certain characteristics of quality assurance systems, namely effectiveness and results of operation at system level, as well as the different methods used, are determined and influenced by the mechanisms connecting the different elements of the system, production, and company strategies (Barta – Tóth, 2001).

According to the modern approach to quality it should not be covered only by the simple execution of the standardised production process. For carrying out a perfect production process without any hazard or defect the following factors are required: appropriate and efficient communication, well-developed and well-operating information system, strong motivation and initiation of the staff, and last but not least the creation of the working and organisational structure required.

The production process will not be perfect and faultless without the existence of the above mentioned factors. Thus development and control are key tasks of the management (Sencz, 1997).

Since quality assurance includes all tasks and activities whose aims are to obtain high quality, the concept of „quality system" can be defined as the complex of organisational structures, responsibilities, procedures, processes and resources aimed at quality management (Hunt, 1994).

Geiger (1996) calls the attention to the coherences between quality and decision-making, while Masing (1997) clearly asserts that the obstacles of the realisation of quality are not of technical but of human nature. In his opinion the management ought to be capable of liquidating such communicational, informational and organisational obstacles.

1. MATERIALS AND METHODS

Research was conducted in the field of poultry processing, a special segment of the Hungarian agri-food sector. The poultry processing companies investigated are situated in the north-eastern region of Hungary. The main objects of the investigations were related to the level and forms of quality assurance in production, and to the changes of the organisational structures having taken place after the implementation of quality assurance systems.

The effects of the implementation, operation and the supervision of the above mentioned quality assurance systems on the organisational structure were investigated, which in case of many companies cannot be clearly distinguished from the production structure itself. The object places of the examination were poultry processing companies of medium and large-size (in respect of the number of employees).

Only four companies were found where the first stages of quality assurance systems have already been implemented. Thus, two large-scale and two medium-sized companies could be evaluated.

It should be mentioned that, according to legal obligations, the HACCP system had already been implemented earlier in all of the examined companies. Other quality assurance systems are being implemented at present in three other companies. In one of the large-scale

companies all the systems have been used since 1999, where the quality assurance systems (except TQM) have been implemented in an integrated way.

2. QUALITY ASSURANCE SYSTEMS

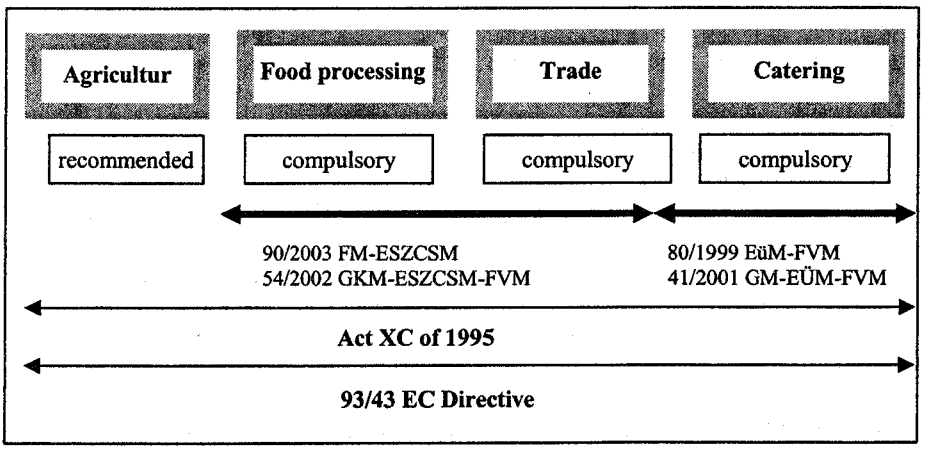
Quality assurance systems have been created for assuring high quality in order to harmonise the different quality management functions and to increase their preventive character. Quality assurance systems are means of managing and controlling companies. Their main object is to coordinate and re-combine the division of labour and different working processes in order to attain the desired final results and quality level. Quality assurance helps to systematise and document activities and functions which can influence product quality. Basically it is a part of the company controlling system which is responsible for the determination of different tasks and demands regarding quality.

There are several systems and models of systematisation of these activities, e. g. the food safety quality management system HACCP (Hazard Analysis and Critical Control Points), ISO 9001 (process-centric quality management system), ISO 14001 (environment-centric quality management system), and TQM (Total Quality Management), which is based on the former ones. The main benefit of quality assurance systems is that they can be also known and evaluated by a third person, e. g. a customer, and moreover they can be certified (Koczor, 2001).

Since all the companies involved were active in the food sector, the first step to develop the HACCP food safety system. For the food processing sector the implementation of the HACCP system is compulsory according to national and international rules and regulations. The introduction of the HACCP system in Hungary is regulated by Regulation No. 1-2-18/93 of the Codex Alimentarius Hungaricus on the "Application of the HACCP system recommended by WHO Codex Alimentarius Committee"(Fig. 1).

Figure 1.

Legal rules of the application of the HACCP System



Source: (1)

After the shaping and implementation of the HACCP system a claim for developing the ISO 9001 process-centric quality management system and the ISO 14001 environment-centric quality management system was drafted, either separately or in parallel, in some of the companies examined.

TQM is more than simple quality assurance, as it includes all levels of quality both in production and consumption, and takes into consideration the different demands and interests of both producers and consumers. As a matter of fact it is a philosophy of management, suggesting permanent innovation and development on all levels of the organisation and under the participation of the entire staff. Team work of the latter is an essential requirement of TQM, but the final success depends on the commitment of the management. TQM is based on several pillars: it is consumer-centric, and requires permanent development, innovation and team-work (Csath, 2001). In the course of their research the authors have found that these ideas were known only in large-scale companies, the appropriate approach of the management being only at the stage of planning.

3. PRACTICAL EXPERIENCE

Special organisational features of the introduction of HACCP food safety system

The HACCP system plays a special role among quality assurance systems, as it is a food safety system created for the area of food production and processing in order to meet the special hygienic requirements to this field. The HACCP system constitutes a systematic method, which is internationally accepted, and used for assuring food safety by means of identifying and detecting possible hazards. The successful shaping and operation of the HACCP program requires total commitment and participation of the management of the company.

The main object of the management of the organisations examined was to develop and certify the HACCP system. The reasons for this decision are double-sided: on the one hand, it is laid down by legislation (Joint regulation 17/1999 of the Ministry of Agriculture and Rural Development and the Ministry of Health); on the other hand, it is one of the specific export requirements. The first step of the shaping of this system was to find the appropriate person to work as a HACCP manager or quality manager, who then would be responsible for the shaping, implementation and control of the program, and also for the selection and education of the team.

In all cases the quality manager was member of the management, his direct superior being the director or managing director. The system could be developed most effectively in team-work. Members of the HACCP team were chosen by the quality manager and appointed by the director. Members of the HACCP team were chosen from different segments of the production and management (director or managing director, quality manager, production manager, quality checker, technologists and stock clerks).

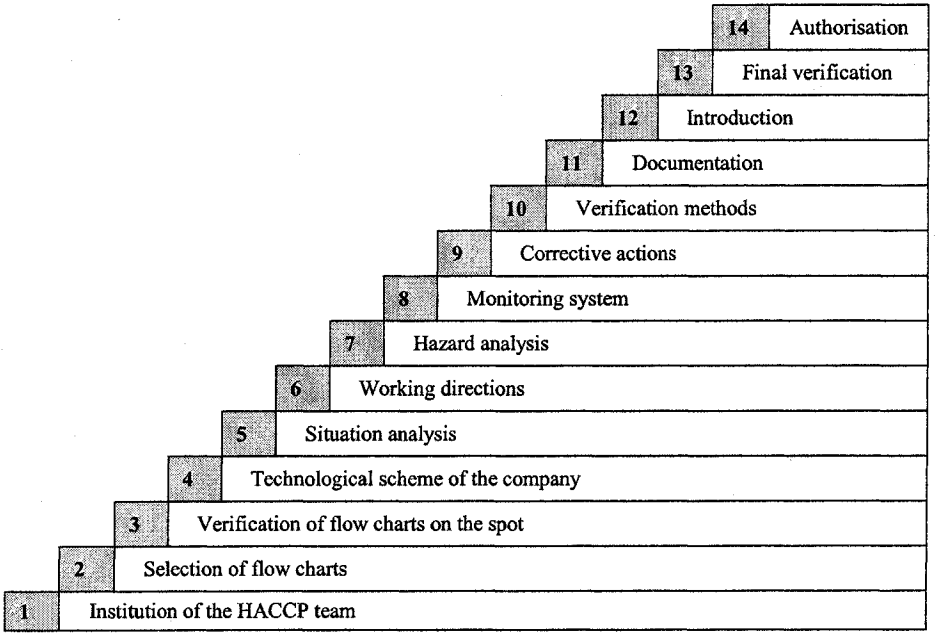
In all cases the need for the help of occasional advisors could be observed, because nobody of the management or the staff had such skills.

The team carried out the investigation of all important parameters of product manufacturing, identified the critical points (CP), and fulfilled its tasks related to documentation, thus satisfying the seven conditions laid down in the rules No. 1-2-18/93 of the Codex Alimentarius Hungaricus.

The HACCP team applied the instructions therein, thus implementing the HACCP system in 14 steps. The success of the shaping stage depended on the commitment of the management. For this sake a "Statement of quality management" compulsory for all the staff was drafted. The shaping of the system was conducted by the HACCP team, where all the members of the team (5-7 persons) were responsible for their respective special field (Figure 2.).

Figure 2.

Main steps of the elaboration of the HACCP system



Source: CONSACT-MAVEMISZ: Kézikönyv a HACCP rendszer kialakításához [Manual of the shaping of the HACCP system

This method was adapted in all companies investigated. A period of 6-10 months was needed for the total shaping of the system in different companies depending on their size. During this period the shaping of the system was finished, and both system and staff had to successfully pass an official certification executed by an independent body.

After having identified the system(s) to be introduced, the management appointed persons responsible for the fulfilment of different tasks in respect of quality.

Circumstances of the shaping of the ISO systems 9001:2001 and 14001:1997 (process-centric quality management and environment-centric quality management, respectively)

The ISO 9001 and ISO 14001 systems for process-centric quality management and environment-centric quality

management have many traits in common. Consequently, it seems logical to establish joint integrated systems of both of them. However, in many cases there are financial reasons excluding to make such a rational decision. Besides, in the target companies examined the elements of the so-called MEBIR system regulating the working and health conditions that must be established according to the MSZ EN ISO 28800 Standard were sought but not found. No instruction in this respect was found among the assurance objects either.

Research revealed that these systems were implemented after each other in the medium-sized companies, whereas in large-scale companies they were introduced parallel to each other in an integrated way. This difference can be explained by the differences in size and the contrasts in the financial background of the companies deriving from these differences.

The management in all the companies investigated recognized the necessity of the implementation of quality assurance systems and their benefits, but the final decision was basically made on a financial basis in each case. The decision depended on possible external financial sources deriving from competitions, and on the amount of own resources, since considerable amounts of money (several millions of Hungarian Forints) are needed for the shaping of different systems.

When the management had finally made the decision on the implementation of a quality assurance system, the staff responsible for quality had to be selected. In large-scale companies a separate quality department was formed for this purpose consisting of a staff of 8-15 persons and a head of department (i. e. the quality manager), who became member of the management of the company.

In medium-sized companies there was no need for forming a separate quality assurance department. Related work was carried out by the managing director aided by a quality assistant. The main tasks of the latter are to care for documentation, keep contact to the managers of production and technology, and inform the managing director of quality issues. This duty was conferred to a person in part-time. The acquisition of knowledge needed was ensured by the participation of the employee in question in training courses. In one of the cases investigated the quality assistant was a new employee. The conditions of his duty were adequate qualification and skills in the field of quality assurance.

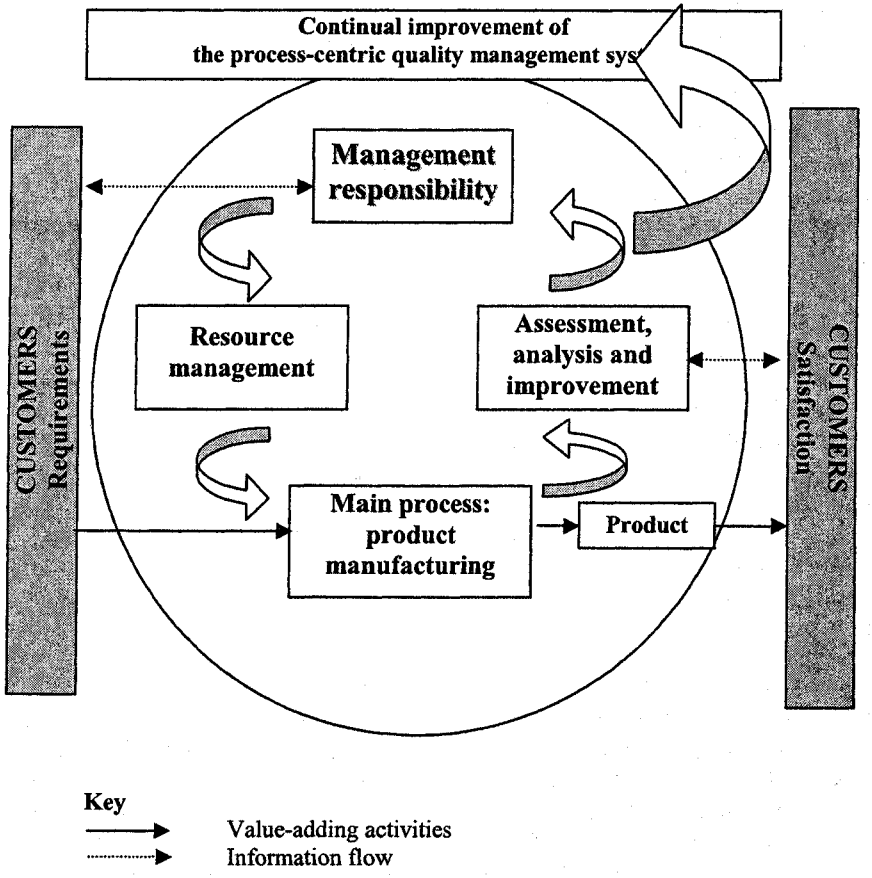
The commitment of the managers is a very important factor and key motivation of the perfect operation of the quality assurance system. Consequently, it is the key to the fulfilment of quality standards. Quality objects are determined by the management for all the levels, both horizontal and vertical, of the organisational structure. This is the fundament of the shaping of any quality assurance system. After the identification of the main objects, the specific means and tools, the particular functions, the responsible persons, and finally the relevant dates and deadlines have to be specified. If the main parameters of the shaping of the system are not precisely determined by the management, permanent supervision is missing, and there is no commitment of the staff, the assurance system will not be certified.

This assumption was confirmed in all organisations investigated by the quality manager or assistant: they said that huge effort, team spirit, and common commitment were needed for the certification of their respective quality assurance systems.

The total period of time required for shaping the process-centric quality management and environment-centric quality management systems in the companies investigated was 10-14 months when implemented separately, and roughly 18-20 months when shaped parallel. (As for the models of process-centric quality management systems and the environment-centric quality management system, see Figures 3 and 4, respectively.) These periods of time can change depending on the rapidity of the process (namely, training or re-training, employment of a new employee, etc.), the ensuring of human resources, and the adaptation to the new circumstances. Another duty and responsibility of the management is to ensure the financial and infrastructural background and conditions for successfully taking the planned measures.

Figure 3.

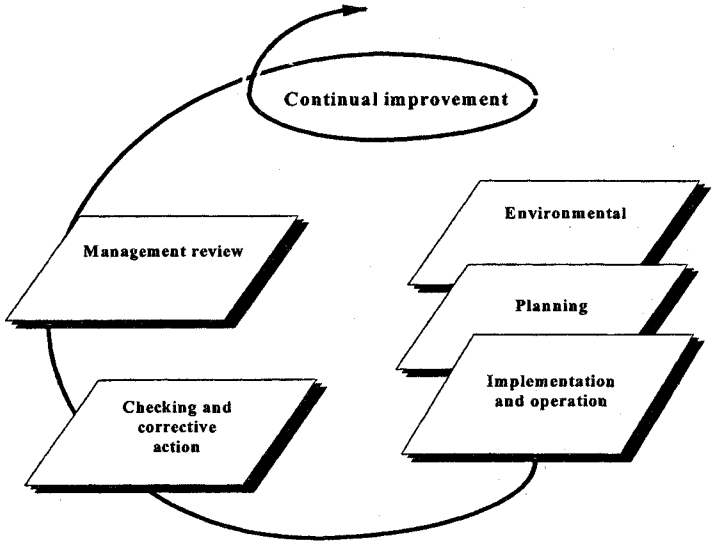
Model of a process-centric quality management system



Source: MSZ EN ISO 9001:2001 Magyar Szabvány [Hungarian Standard]

Figure 4.

Model of an environment-centric quality management system



Source: MSZ EN ISO 14001:1997 Magyar Szabvány [Hungarian Standard]

Evaluation of the application of the TQM (Total Quality Management) system

The system for Total Quality Management (TQM) is only at the stage of planning in the companies investigated. Its implementation is one of the medium-term strategic plans, but only for large-scale companies. Their management has already recognized the advantages and necessity of TQM as a strategic technique of management

As for medium-sized companies, the desire to implement the TQM system has not yet taken place, since the TQM theories and possibilities given by this system are not well-known by the managers of these companies. Thus, unfortunately there are no concrete objectives in the quality management plans in this respect yet.

4. CONCLUSIONS

As a conclusion it can be stated that the poultry processing industry in the examined region meets the relevant Hungarian and EU standards and requirements. Of course there are some deficiencies like in other sectors of national economy, but the companies investigated were interested in the eligibility for quality assurance systems. These companies employ also other methods and systems, but their efforts are induced by market competition.

The authors' research proved their assumption, according to which the shaping of a quality assurance system would cause changes in production and organisational structure too. These changes were influenced by different factors like the type of the quality assur-

ance system, the size of the organisation, the commitment of its management and staff, new approaches, and financial background. It can be stated that the managers of the companies examined consider the implementation of quality assurance systems their compulsory duty, which they have to fulfil in order to sustain the position of their respective companies on the market.

It could be observed in the companies examined that they did not pay enough attention to having an appropriate number of employees dealing with quality. Either a quality management department has not been even created yet or, if so, it did not have enough workers and did not exhibit the appropriate efficiency. This could have several reasons, e. g. cost-saving resulting in part-time work of employees dealing with quality management, the lack of increase in the number of working places or of retraining. Another reason was the poor level of quality commitment of the management, which resulted in reduced efficiency.

Some organisations do not feel the necessity of continuous development, which should be primarily formulated by the management. These organisations have only short-term development objects in view instead of long-term ones.

In the authors' opinion a significant trend towards a higher level of quality assurance systems like TQM, EFQM model, etc. is necessary in order to satisfy not only the consumers but also the staff of the organisation.

Nevertheless, all the companies investigated recognised the advantages of quality assurance systems, such as: the improvement of the organisational structure and the processes of production, transparency, and the opportunity of a better documentation and control. It is obvious that an ISO certification does not make a product perfect, but it provides a good basis for its improvement and the rise of the level of its quality.

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MINŐSÉGBIZTOSÍTÁSI RENDSZEREK BEVEZETÉSÉNEK HATÁSAI A BAROMFI-FELDOLGOZÓIPARI VÁLLALKOZÁSOK MUNKASZERVEZETÉRE

MIKÁCZÓ ANDREA – Dr. HAJÓS LÁSZLÓ

Az élelmiszeripari vállalkozások tevékenységeinek minőségbiztosítására vonatkozóan különféle állásfoglalások alakultak ki. Egyesek szerint a GMP, GHP, HACCP rendszerek kellő mélységig szabályozzák a minőséggel és – az élelmiszer-előállításban oly fontos – higiéniával kapcsolatos szabályozásokat. Mások úgy vélik, hogy ezen rendszereken túlmenően szükség van további, olyan minőségbiztosítási rendszerekre is, amelyek az élelmiszer-biztonságon, és higiénián túlmenően a szervezet teljes egészére vonatkozóan tartalmaznak előírásokat, illetve a környezetvédelemre is kiterjednek. Ezek igazolásra pedig mi sem kézzelfoghatóbb, mint egy független tanúsító szervezet felülvizsgálta az ISO szabványok alapján kialakított rendszerekre vonatkozóan.

Ezért tűztük ki célul az élelmiszeripari vállalkozások – ezen belül is a baromfi-feldolgozó iparág – vizsgálatát. Arra próbáltunk rávilágítani vizsgálódásaink helyszínén – az észak-kelet magyarországi régió baromfi-vágóhídjain -, hogy a minőség biztosítására kellő hangsúlyt fektetnek-e vizsgált szervezetek, és milyen módon valósítják azt meg a szervezeten belül.

Az volt tapasztalható, hogy a minőségbiztosítás kérdése valamennyi kutatási helyszínen napirendi kérdés volt. A vállalkozások vezetői felismerték a minőségbiztosítási rendszerek adta kedvező lehetőségeket, annak ellenére is, ha kezdetben kisebb-nagyobb ellenérzéssel fogadták a munkatársak a rendszerbevezetés miatt adódó többletfeladatot, átképzést, munkakörbővülést.