CONSIDERATIONS ABOUT FOOD SAFETY MANAGEMENT SYSTEM'S AUDITING

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ABSTRACT

A food safety assurance program often used by the food processing industry is the Hazard Analysis Critical Control Point (HACCP) system with the goal to identify the major risks in the food chain to identify the critical control points. Most agree that comprehensive risk assessment is increasingly important for success (or even survival) of an entity, but how to go about it systematically is open to debate. Through audit, regulators can look at records of what has been happening within the food business, a day-to-day history of compliance, and not just the "snapshot in time" of current inspection methods. This method gives regulators and the community increased confidence that food safety is being maintained by food businesses on a continuing basis.
To help the implementation and improvement of an adequate food safety management system the paper synthetize the role of the audit process in the risk management, propose some criteria's which can be used in the preparation of the audit process and illustrate the application of the proposed criteria's and principles with a food safety audit checklist.

1. INTRODUCTION

The most effective food safety management systems are established, operated and updated within the framework of a structured management system and incorporated into the overall management activities of the organization.
Part of the problem is the difficulty of identification and measurement of the threats or risks. For example, quantifying past events is relatively easy compared to quantifying threats to expected future events. Threats are possibilities, and at any point in time there are many possibilities (and combinations of possibilities) leading to problems in assessing and reporting on ranges of possible outcomes.
A second problem is risks can change rapidly and possible changes must be identified before they can be measured. Third, threats can't be fully evaluated even after the passage of time because some don't materialize and others arise but are prevented or mitigated by control activities. Finally, there is no natural measurement process and point in time for risk measurement as there is in measuring a sale, the purchase of an asset, or incurrence of liability or expense. By its nature, risk involves more than one possible real-wold condition or event that has occurred or might occur in the future. Thus, numbers, categories, or labels to represent risk assessments are different from business process measures of a single condition at a point in time. This means that there is no single answer that can be determined to be correct in measuring or auditing risk assessments. There is inherently more uncertainty in auditing risk assessments than auditing the current cash or inventory balance. The multiple possibilities for joint occurrence of risks greatly complicate measurement of and auditing risk assessments and processes. Furthermore, the evaluation of risk management performance is hindered by the difficulty of determining whether occurrence of an undesired event is due to bad event identification, bad risk assessment, bad information, bad modeling, bad strategy or bad implementation.

2. PERFORMANT RISK MANAGEMENT AND THE AUDIT

Determination of business objectives and strategies to achieve them is beyond the scope of risk management. However, assessments of all potentially serious risks inherent in strategies and business processes must be part of internal or external control (ensured by internal or external audits) and are essential for evaluating the relevance and reliability of information and its context.
In developing a comprehensive evaluation method, business risks can be classified in many ways. One useful way may be:
a) External Environment Risks: threats from broad factors external to the business including substitute products, catastrophic hazard loss, and changes in customers' tastes and preferences, competitors, political environment, laws/regulations, and capital and labor availability.
The external environmental category includes longer-term factors external to the firm that are largely beyond management's control.
Catastrophic natural events (sometimes called hazard risks) are not controllable by management, yet management can limit the enterprise's exposure to their effects. Similarly, management can influence environmental change to some degree through research and development of technology, advertising, and lobbying of governments.
b) Business Process and Asset Loss Risks: threats from ineffective or inefficient business processes for acquiring, financing, transforming, and marketing goods and services, and threats of loss of firm assets including its reputation.
c) Information Risks: threats from poor-quality information for decision-making within the business (the risk of being misinformed about real-world conditions due to using measurement methods that are not relevant, from careless or biased application of measurement methods or their display, or from incomplete information).
Information risk also applies to the risk of providing erroneous or misleading information to outsiders.
Risk management may be defined as a process, implemented by an entity's board of directors, management, and other personnel, comprising internal controls applied in strategy and across the enterprise, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations and processes;
- Reliability of financial reporting;
- Compliance with applicable laws and regulations.

The audit process outlines the role and responsibilities of food safety auditors and describes an audit methodology based on international standards. Models have been developed for determining appropriate audit frequencies, for reporting nonconformance and for moving within audit frequency ranges.
The management systems are based on international standards and involves the development of policies and procedures to ensure the integrity of the audit system. It covers areas relating to auditing personnel, conflict of interest and commercial confidentiality.
The author considers auditing basic role with regard to risk management is to provide objective assurance to the board on the effectiveness of an organization's activities to help ensure key business risks and the above presented objectives are being managed appropriately and that the system of internal control is operating effectively.
Audit functions (AF) in the risk management and management decisions are illustrated in Figure. 1.

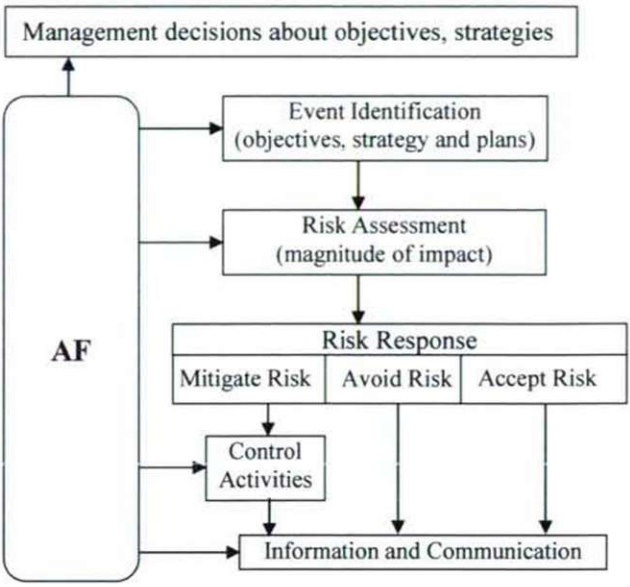

Fig 1. Audit Functions (AF) in the risk management and management decisions

To achieve these audit functions it may be useful to apply some recommendations and criteria's in the risk management and auditing process.

3. THE PROPOSED RECOMMENDATIONS AND CRITERIA'S. EXAMPLE

All food production procedures involve risk. All operations require decisions that include risk assessment as well as risk management. Supervisors in food production from the farm to the fork, along with every individual, are responsible for identifying potential risk and adjusting or compensating appropriately. Risk should be identified using disciplined, organized, and logical thought-processes that ensure the best food safety and security possible.

Good risk management from the farm to retail can provide many benefits to overall food safety and security, for this it recommended to taking account of the following proposed risk management recommendations (R):

R1. Accept no unnecessary risk. Unnecessary risk comes without a commensurate return in terms of real benefits or available opportunities;

R2. Make Risk Decisions at the Appropriate Level. Making risk decisions at the appropriate level establishes clear accountability. Those accountable for the success or failure of the product must be included in the risk decision process;

R3. Accept Risk When Benefits Outweigh the costs. All identified benefits should be compared to all identified costs;

R4. Integrate the risk management into Planning at all Levels; to effectively apply the risk management, managers must dedicate time and resources to incorporate the risk management principles into the planning processes. The making of important risk decisions should be preplanned whenever possible.

The implementation of an efficient risk management should be made in several steps, which may be:

1) Identify the hazards;
2) Asses the risk;
3) Analyze risk control measures
4) Make control decisions;
5) Implement risk controls;
6) Supervise and review.

Taking account to the above presented aspects the risk management may be defined as: Analyze food safety and security risks and implement risk control decisions (steps 3, 4 and 5). It is recommended to conduct a risk assessment after controls are in place to ensure risks are reduced.
Due of this specific activity's we can synthesize the role of the audit process in the risk management as follows:

1) Auditing basic roles in regard to the risk management:
- Giving assurance on risk management processes;
- Giving assurance that risks are correctly evaluated;
- Evaluating risk management processes;
- Evaluating the reporting of key risks;
- Reviewing the management of key risks.

2) Legitimate internal auditing roles with safeguards:
- Facilitating identification and evaluation of risks;
- Coaching management in responding to risks;
- Coordinating risk management activities;
- Consolidating the reporting on risks;
- Maintaining and developing the risk management framework;
- Developing risk management strategy for board approval

3) Roles which auditing should not undertake:
- Setting the risk appetite;
- Imposing risk management processes;
- Management assurance on risks;
- Taking decisions on risk responses;
- Implementing risk responses on management's behalf;
- Accountability for risk management.

The audit process must be prepared in time and the obtained results must be documented. In the first phase it is recommended to make a check list with questions which must be answered by the audited part during the audit.
The second phase of the audit is the preparation of the audit report by the audit team taking account to the used check list and the obtained responses.
The audit check list should be prepared by the auditors, based on specific audit criteria's. In opinion of the author in the food safety management system's auditing these basically auditing criteria's may be the following (Table 1):

Table 1. Food safety management system's auditing criteria's

1) Existing of a food safety team;	8) Corrective actions (principle 5)
2) Product description and identification;	9) Verification procedures (principle 6)
3) Flow diagrams;	10) Record keeping (principle 7)
4) Hazard analysis (principle 1)	11) Measurement equipment status
5) Critical control points (principle 2)	12) God hygiene practice
6) Critical limits (principle 3)	13) Documentation system
7) Monitoring procedures (principle 4)	14) Trainings

Using these proposed criteria's we can establish questions for each auditing criteria and realize an audit check list with the structure proposed in Table 2:

Table 2. Food safety audit check list structure

Audited by:	Date of Audit:
Criteria * / Requirement:	Results:
Food Safety TEAM Has a Food Safety co-ordinator been appointed?	
PRODUCT DESCRIPTION Has a product description/product specification been prepared for each product?	
FLOW DIAGRAM Has a flow diagram been prepared for each product (Y/N)	
PRINCIPLE 1 - HAZARD ANALYSIS Have all reasonable biological, chemical or physical hazards been identified at each step?	
PRINCIPLE 2 - CRITICAL CONTROL POINTS Have the Critical Control Points for each significant hazard been identified and transferred to the Hazard Audit Table?	
PRINCIPLE 3 - CRITICAL LIMITS Have Critical Limits been established for each Critical Control Point?	
PRINCIPLE 4 - MONITORING PROCEDURES Do the monitoring procedures specify what, when, how, where and who?	
PRINCIPLE 5 - CORRECTIVE ACTION Do the corrective actions ensure that the critical control point is brought under control?	
PRINCIPLE 6 - VERIFICATION PROCEDURES Do the verification activities demonstrate that the Critical Control Points are under control?	
PRINCIPLE 7 - RECORD KEEPING Have records been maintained for all monitoring procedures?	
MEASUREMENT EQUIPMENT STATUS Are there documented procedures for calibration?	
GOOD HYGIENE PRACTICES (GHP) Are personal hygiene procedures practiced / monitored?	
DOCUMENTATION Is the Food Safety Program Manual and relevant forms and procedures up-to-date?	
TRAINING Is there a training plan to provide identified training needs?	

4. CONCLUSIONS

A food safety program is based on the Hazard Analysis and Critical Control Point (HACCP) principles and is a documented program that systematically identifies critical points in food handling operations that, if not controlled, may lead to preparation of unsafe food. Food Safety Programs are based on requirements imposed by standard. The standard requires documenting and implementing a food safety program based on the seven basic HACCP principles.
Through audit, regulators can look at records of what has been happening within the food business. This method gives regulators and the community increased confidence that food safety is being maintained by food businesses on a continuing basis.
To help the implementation and improvement of an adequate food safety management system the paper synthesize the role of the audit process in the risk management, propose some criteria's which can be used in the preparation of the audit process and illustrate the application of the proposed criteria's and principles with a food safety audit checklist.

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