

The World's Largest Open Access Agricultural & Applied Economics Digital Library

# This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<a href="http://ageconsearch.umn.edu">http://ageconsearch.umn.edu</a>
<a href="mailto:aesearch@umn.edu">aesearch@umn.edu</a>

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

## SATISFACTION OF THE EMPLOYED IN FOOD BUSINESSES AND SUCCESS OF FOOD SAFETY MANAGEMENT SYSTEM IMPLEMENTATION

RADOSLAV GRUJIC, PH.D. Faculty of Technology Zvornik University of East Sarajevo, Bosnia and Herzegovina

SLAVICA GRUJIC, PH.D. Faculty of Technology University of Banja Luka, Bosnia and Herzegovina

PEJO DURASINOVIC, PH.D. Faculty of Political Science University of Banja Luka, Bosnia and Herzegovina

PERO PAVLOVIC Sanitary Inspection of Republika Srpska Community of Zvornik, Bosnia and Herzegovina

JEL Classifications: J28, L23, L66, M11; UDC: 664

**Key words:** HACCP, employees' social status, efficiency of HACCP system application.

**Abstract:** Efficiency of food safety management system application, such as HACCP system, depends on personnel employed in a company (salary, social status, job stability, superiors' relation toward workers and relationship among workers themselves, knowledge background, etc). Results presented in this paper are the results of surveys conducted in food businesses in Bosnia and Herzegovina. A special part of the research is related to employees' social status and employees' opinion of their status in a company.

ISSN: 1804-0527 (online) 1804-0519 (print)

PP. 33-36

### Introduction

While designing regulations on food, authorized bodies in all states worldwide strive to ensure high level of public health and protection of customers' interest. Food businesses are required to establish and implement in practice regular control of hygienic conditions in production and food trading and to implement prevention system for self-control, based on Hazard Analysis and Critical Control Points (HACCP). HACCP system is a systematic approach for identifying hazards and risks in food management (Grujic et al., 2003; Antunovac, 2008).

Risks of food poisoning, which can jeopardize consumers' safety, are numerous and diverse. Hazards, whose presence in food represent risks for consumers, can have different origin: biological, chemical and physical. During risk analysis, a producer is required to identify all potential hazards, estimate food and people exposure to these hazards and characterize risks derived from appropriate hazard. HACCP system enables one to plan corrective measures in advance and to initiate them before serious problems arise. Already in the product development phase starts health foodstuff safety care. Parameters controlled during the HACCP system implementation are easily monitored, and all employees in the company are involved in the control system. At the end, the result is a production cost-cutting. Food traceability through all phases of production, processing and distribution "from pitchfork to fork" has become obligatory activity in foodstuff production, distribution and sales (Burlingame and Pineiro, 2007; Raspor, 2008).

Although there is no legal obligation, at the moment, for food safety management system implementation, through different programs of entities' governments in Bosnia and Herzegovina (Republic of Srpska Government and Government of BH Federation) and international projects, authorities in Bosnia and Herzegovina offer incentives for food businesses to develop more easily, implement and apply HACCP system in the most efficient way. These resources are not still sufficient for companies, which are in financial crisis and for companies under influence of global economic crisis, as they consider insufficient financial resources as one of the biggest barriers for HACCP system development (Jovisevic et al., 2005; Grujic and Radovanovic, 2008). However, unless they implement HACCP system authorities in Bosnia and Herzegovina and owners of food production businesses are aware of the fact they will slowly start losing partners and will not be able to export food into the European Union countries as well as into the neighboring countries (Serbia, Croatia, and Slovenia).

In the beginning of HACCP system development in a company, potential obstacles should be identified. These obstacles are different, and influence of sector type in food business is particularly emphasized. Some of obstacles may have internal character and they are related to company employees (such as: knowledge level, lack of experts, frequent experts' turnover, large number of employees with short-time contracts, employees wages, and different kinds of employees dissatisfaction with their social status within a company). In the last ten years small and middle food business companies in Bosnia and Herzegovina started with development and implementation of HACCP system. During this period certain experiences are obtained and certain

problems emerged, some solved on the fly and some became insurmountable obstacles for companies' owners and management.

This paper has a task to question, identify and describe striving of small and middle companies in Bosnia and Herzegovina for developing clear and feasible food safety management system and for establishing employees' motivation level in order to continuously improve their knowledge about hygiene in food production and to contribute companies' efforts in improving food safety, regardless of their unfavorable social status.

#### Material and methods

The questionnaire is designed on the basis of questions from similar questionnaires in earlier papers, which were available to the authors of this paper (Taylor, 2001; Taylor and Kane, 2005; Grujic and Radovanovic, 2008; Jevsnik at al., 2008), and on the basis of good knowledge of companies' position, production type, companies' affiliation to a certain sector, detailed knowledge of HACCP principles and according to the expected information.

The questionnaire given to the employees consisted of two parts (general part related to the company and the surveyed employees and a part related to employees' opinions about their social status within the company). The survey encompassed employees in food businesses: manufacturing

industry (food industry, food canning) and employees in warehousing and distribution companies (commercial chains, hotels, restaurants, fast food shops, etc.). The survey encompassed 117 companies and 2114 respondents in 10 towns in Bosnia and Herzegovina (Grujic et al., 2010).

#### Results and discussion of results

Results acquired during the research are shown in 6 tables. Results overview and discussion are divided into two parts: (1) general information on company and respondent and (2) employee status in company and his/her social status.

**General information.** Most of companies (38%) encompassed with this research, belong to service sector (restaurants, hotels, mess rooms). Further there are production and processing (production, processing, packaging) companies (27%), food trade production (14%), retail or end-consumer sale (10%), distributors as import, wholesale and distribution firms (8%). Only 3% of the surveyed companies were dealing with primary food production (Grujic et al., 2010).

The research gave the following results: 25% of companies employed less than 5 employees, 26% of companies employed between 5 and 10 employees, 26% of companies employed 11 to 50 employees, 17% of companies employed 51 to 200 employees and only 6% of companies employed more than 200 employees (Grujic et al., 2010).

TABLE 1. EMPLOYEES' OPINION ON THEIR CO-WORKERS' ATTITUDE TOWARD HYGIENE WHILE DEALING WITH FOOD

Opinion	Average mark
They work in accordance with food safety requirements	3.8
They fill forms carefully and regularly	2.7
They often perform required temperature measuring	3.2
They always wash their hands after using toilettes	4.1
They often wash their work clothing	4.3
They have to clean tools and equipment	4.3
They regularly control date of expiry	4.0
They take care not to cause crisscross contamination	3.9
They inform their superiors about all health problems	3.7
They follow DHP principles	3.3

TABLE 2. RESPONDENTS' STATEMENTS ON GENERAL EMPLOYEES' SPIRIT IN A COMPANY

Opinion	Average mark
If I would have chosen the same profession, I would work in the same company	3.4
If I have professional problems that disturb me, I would talk about it with my co-	3.7
worker	
If I have personal problems that disturb me, I would talk with my superior	3.4
I always perform my duties in accordance with the written and agreed guidelines	3.9
I would leave the company, if I would have found better paid job	3.5
I would leave the company, if I would have found more interesting job	3.3
I will work in a same company until retirement	2.7
I often compete with me work colleagues	2.5
If I were choosing my profession again, I would choose the same one	3.2
I have found a job interesting for me	3.2

TABLE 3. RESPONDENTS' OPINION ABOUT COLLEAGUES AT WORK

Opinion	Average mark
Colleagues at work disturb me in my work	2.2
I have friendly relationship with colleagues at work	4.3
Co-workers ignore me	2.6
I will progress with my colleagues	3.6
I have no contacts with my colleagues at work	2.4
Colleagues at work are selfish	2.2
Co-workers are acceptable to me	3.5
I do not take care of my colleagues	2.6
Colleagues at work help me	3.7

Employees' status in a company and their social status. Interpersonal relations within a company can have great influence on a production process itself, and on foodstuff safety as well. All employees together take part in the same production process - chain. A chain is safe as much as its weakest link is safe. The lowest mark had the following opinion: "They (meaning co-workers) fill forms carefully and regularly" with the average mark of 2.7. The highest average mark had the opinion "They have to clean tools and equipment" 4.3 (Table 1).

Employees' spirits point to general condition in the company, starting with working, financial, economic, organizational and other conditions. An employee who is unsatisfied with own status does not give maximum in production itself, as well as in foodstuff safety maintenance.

Among the ten possible statements (Table 2), the statement "I will work in the same company until retirement" is marked with the average of 2.7, which points to employees' dissatisfaction with their status in a company. Even lower mark, 2.5, was given to the opinion "I often compete with my co-workers", meaning that there is no competitive spirit in a company because most probably employees are not adequately awarded. This opinion should be compared to opinions about work satisfaction.

The following employees' opinions point to interpersonal relations within company. The lowest average mark has the opinion "Colleagues at work are selfish" and "Colleagues at work disturb me in my work" with the average mark of 2.2. The opinion "I have friendly relationship with colleagues at work" with the average mark of 4.3 is indicative (Table 3).

TABLE 4. EMPLOYEES' OPINIONS ABOUT THEIR SUPERIORS

Opinion	Average mark
The superior awards me for good performed job	3.7
I have learnt something from my superior	3.8
The superior is good in organizing the work	3.9
The superior is fair	4.1
The superior is improving himself in his/her job	3.7
The superior meets all his/her promises	3.7
The superior respects my suggestions and opinions	3.7
The superior know what I am doing	3.8
The superior encourages me at work	3.7
The superior puts effort so I could perform my tasks	3.5
I have no contact with my superior	2.4
The superiors do not notice me	2.0

TABLE 5. RESPONDENTS' EVALUATION OF SATISFACTION AND MOTIVATION AT WORK

Respondents' opinions from 1(lowest) to 5 (highest)	Average mark	
Work	3.4	
Promotion possibility	3.1	
Superiors' understanding of your promotion	3.3	
Benefits given in a company	3.5	
Interpersonal relationships at work	4.2	
Own position at work	3.6	
Relationship between you and your superior	3.8	
Work conditions	4.0	
Health and work safety measures	3.9	
Education and training organization at work	3.5	
Superior's evaluation of your work	3.3	
Salary	3.1	

TABLE 6. OPINIONS OF EMPLOYEES WHO DEAL WITH FOOD ABOUT FOOD SAFETY

Respondents' opinion	Agree	Indefinite	Disagree
Safe food handling is the most important part of my job responsibilities	89.7	8.5	1.2
Additional education about food safety is important for me	86.3	12.8	0.7
I believe I work in accordance with food safety	94.0	5.1	0.7
Raw materials should be separated form finished food	95.7	2.1	1.2
Defrost foodstuff can be frozen only once	83.8	10.2	5.9

Analyzing these opinions, one can observe that relationship between superiors and workers are based only on benefits and company profit (Table 4). The lowest marked has the opinion "The superior does not notice me" with the mark 2 and the highest mark has the opinion "The superior is fair" (4.1) and the opinion "The superior is good in organizing the work" (3.9).

The employees were asked to evaluate own satisfaction and motivation at work within 12 offered opinions with marks from 1 (lowest) to 5 (greatest). The question was: "How would you evaluate your own satisfaction and motivation at work" and the following results were obtained (Table 5): average mark for work satisfaction was 3.4, promotion possibility 3.1, superiors' understanding of your promotion 3.3, salary 3.1, work conditions 4.0. None of the offered opinions was evaluated with the highest mark. If these opinions about motivation and satisfaction at work are compared to opinions about general mood of employees it can be concluded that majority of employees would leave a company if they would have found more interesting and better paid work. Frequent employees turnovers have unfavourable reflection on foodstuff safety which is connected with lack of new employees' training.

When motivation and satisfaction at work are in question, the respondents gave the lowest marks to benefits, salaries and promotion in service and the highest to relations in work process, health protection and work safety.

The employees were offered 5 questions, they should answer with "agree" or "disagree", and which were related to employees' awareness and their direct influence and responsibility for food safety (Table 6). Large majority of employees agree that safe food handling is the most important part of their job responsibilities. Even when they think they handle food properly, large majority of the respondents agree that additional education about food safety is important for them.

#### Conclusion

Social status of employees in food businesses, their interpersonal relationship and relation between owner and management towards employees can significantly influence on reaching goals set in HACCP Study on Foodstuff Safety. Unsatisfied employees can be potential hazard for product safety, which is why companies' owners and management must take adequate activities for improving their social status and relations within company.

Narrow and broad social community is interested in having order and organization in this business segment, in obeying valid regulations and protection of population from possible consequences of food usage which is not of appropriate quality and safety.

#### References

Antunovac B., Mancuso A., Capak K., Poljak V., Florijancic T., 2008. "Background to the Preparation of the Croatian Food Safety Strategy", Food Control, 19, pp.1017-1022.

Burlingame, B., Pineiro, M. 2007. "The essential balance: Risks and benefits in food safety and quality", Journal of Food Composition and Analysis 20, pp.139-146.

Grujic, R., Sanchis, A., Radovanovic, R., 2003. HACCP - Theory and practice, University of Lleida and University of Banja Luka, EU Project TEMPUS IB\_JEP 16140-2001.

Grujic, R., Radovanovic, R. 2008. Barriers in food safety management system implementation in SMEs, Processing: International Conference on Food Safety and Certification Procedures in Bosnia and Herzegovina, Brcko.

Grujić, R., Grujić, S., Đurašinović, P., Pavlović, P., 2010. Workers responsibility in food business during implementation of food safety system, Aplied Technologies and Inovations/ATI, Vol1 (in press).

Jevsnik, M., Hlebec, V., Raspor, P. 2008. Food safety knowledge and practices among food handlers in Slovenia, Food Control 19, pp.1107-1118.

Jovisevic, V., Bobrek, M., Grujic, R., 2005. Standardi Evropske unije za izvozno orjentisana preduzeća: QMS, HACCP, CE, EDA i Delegacija Evropske komisije u BiH - The EU Standards for export-oriented companies: QMS, HACCP, CE, EDA and the EU Delegation in Bosnia and Herzegovina.

Raspor, P., 2008. Total food chain safety: How good practices can contribute?, Trends in Food Science & Technology 19, pp.405-412

Taylor, E., 2001. HACCP in small companies: Benefit or burden, food control, 12, pp.217-222.

Taylor, E., Kane, K., 2005. Reducing the burden of HACCP on SMEs, Food Control, 16, pp.833-839.