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Significance of official food control in food safety: Food business operators' perceptions

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ABSTRACT

Finnish food business operators' (FBOs) opinions of the food control inspections performed by local authorities were evaluated, using a questionnaire. The production types of FBOs included were slaughterhouses, meat, fish and milk plants, egg-packing plants and storage facilities dealing with foods of animal origin. Based on a total of 459 responses, we noted that the impacts of official controls were considered valuable for food safety, since 78.8% of the respondents saw that the actions taken based on inspections had enhanced the safety of the products. The results also highlighted the importance of inspectors being familiar with the production processes to increase the efficacy of food control. More frequent visits by official inspectors correlated positively with FBOs' conceptions of noncompliances being relevant for food safety. The FBOs saw local inspectors as the most important sources of new information concerning food safety legislation and 89.1% of the respondents confirmed that discussions with local inspectors had helped them understand the food safety risks within their processes. We also noted that the bigger the FBO, the more clearly they seem to perceive the risks associated with their processes (Spearman's rank correlation coefficient $r = 0.127$, $P = 0.009$).

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1. Introduction

In the European Union, food control is based on regulations covering the food chain from farm to table. The regulation covering the hygiene of foodstuffs (EC No 852/2004) defines the obligations of food business operators (FBOs), stating that "Food business operators shall ensure that all stages of production, processing and distribution of food under their control satisfy the relevant hygiene requirements". The competent authority is responsible for carrying out official controls to verify FBOs' compliance with food safety requirements (EC No 854/2004). On the national level in Finland, the Food Act defines that the responsibility of the FBO is to confirm the safety of the products, using a self-checking system that is then audited by the authorities (Food Act 23/2006).

In Finland, the supervising authority in official food control is the Finnish Food Safety Authority Evira, but the responsibility for organizing and conducting food control at the local level lies in the

municipalities. Slaughterhouses have a full- or part-time inspector on site, working for the Evira, but the other facilities are completely under municipal control. Due to the autonomy of the municipalities, as safeguarded by the Finnish Constitution, local authorities may plan for and put into action the official food control independently, taking into account the legislative requirements. Regional agencies audit the local food control systems, but municipal independence may, however, lead to diverse ways of organizing, as well as resourcing the food control sector. Food control sector is in most cases headed by a veterinarian, and the inspections to the FBOs are conducted by either veterinarians or health inspectors, with more variable training on food safety issues. In Finland, 17–25% of the veterinary curriculum is composed of food control and environmental health education. Traditions in carrying out the official control may also vary among different local control units, e.g. how much focus is on giving instructions or discussing noncompliances with the FBO. The factors likely to reduce resources include the lack of knowledge of food control among municipal decision makers (Tähkää, Majjala, Hörman, Poutiainen-Lindfors, & Korkeala, 2008). Inadequate resourcing inevitably leads to strict prioritizing in targeting the inspection visits and less frequent inspection visits to certain food production establishments. This may have impact on the FBOs' opinions on the effect and benefits of food control.

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Official food control may be considered as one of the corner stones in producing safe food and promoting public health, but its efficacy is something that may not be taken as self-evident. Despite comprehensive steering by legislation, legislative demands are not necessarily implemented as such to the food production processes for several reasons, such as economic ones. Larger facilities consider systems related to food safety and quality as an effective investment, while the small firms perceive them as prohibitive burdens (Jayasinghe-Mudalige & Henson, 2007). There are also factors other than official control having impact on the level of food safety, such as the direct impact of the consumer. In the Canadian red meat- and poultry-processing sector, market-based incentives have a greater impact on food safety responsiveness than governmental regulatory actions (Jayasinghe-Mudalige & Henson, 2006).

No effective methods yet exist for evaluating the true impact of food control on food safety. Epidemiologic data on food-related illnesses may be applied for evaluating the impact of food safety control plans (ICMSF 2006), but since the majority of food poisonings are restaurant-derived epidemics (Gould et al., 2011), this method is not directly applicable at the level of food-processing plants. The attitudes of the FBOs towards food control and the FBO's perception of food safety issues may also have a significant impact on the realization of official food control, but the scientific data are yet lacking. Understanding the importance of corrective actions and the willingness to follow the instructions given by the official inspector could be considered as having a direct effect on the level of food hygiene. The aim of this study was to clarify the opinions of FBOs about food control to enhance the efficacy of food control practices.

2. Materials and methods

2.1. The questionnaire

A questionnaire to evaluate the FBO's attitudes towards food safety inspections was developed. The questionnaire contained Likert-scale questions, other multiple choice questions and open-ended questions. It was divided in four parts. The first part included questions on company revenue, type of production, location, number of employees and the respondent's position in the company. In the second part of the questionnaire, information on inspection frequencies, inspecting authorities and the respondent's views about the course and the conformity of the inspections was collected. The third part measured the respondent's opinions on the guidance given by the inspectors. In the last part, the respondent answered questions concerning the effects of the inspections in the particular facility. The questionnaire was issued to all 1276 establishments dealing with food of animal origin before the retail stage in 2006 in Finland. These included slaughterhouses, meat, fish and milk plants, storage facilities dealing with foods of animal origin, and egg-packing plants. The postal addresses of these companies were acquired from the Evira register of approved establishments. The inquiry was launched in February 2006, and a reminder was sent 3 weeks later.

2.2. Statistical analyses

Statistical analysis was performed, using SPSS 20.0 (IBM SPSS Software; IBM Corp., Armonk, NY, USA). In grouping the data by the size of the establishments, the European Commission Recommendation 2003/361/EC on the definition of micro-, small- and medium-sized enterprises was applied. In this a microenterprise is defined as one that employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million, a small enterprise is one that employs fewer than 50

persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million, and a medium-sized enterprise is one that employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance sheet total does not exceed EUR 43 million (EC 361/2003). An FBO exceeding these numbers was defined as large.

The statistical test used to evaluate the correlation between different Likert-scale responses was Spearman's correlation, with two-tailed significance. Statistical significance was accepted with a probability value of 0.05 or less (confidence interval CI = 95%). In the analysis the 'don't know' answers were categorized as missing. Comparison between different groups was performed, using the Kruskal–Wallis test with 95% significance and the variables used in grouping were the size of the establishment and the type of the production.

3. Results

3.1. The respondents

Of the 1276 food establishments, 459 (36.0%) responded to the survey. Of the respondents, 28 represented more than one type of production. These 28 FBOs were handled as different establishments representing the various production types, so the total number of establishments in the analysis was 490. The types of plant most often represented in the sample were the fish plants (28.0%, 137/490), followed by the small-scale meat plants (18.2%, 89/490) (Table 1). Micro-sized establishments represented the majority of the respondents (57.6%, 282/490). The other establishment categories were small (22.2%, 109/490), medium (8.2%, 40/490) and large (3.3%, 16/490). The high number of micro- or small establishments reflects the overall distribution of Finnish enterprises, the percentage of these comprising 98.9% of all enterprises (OSF, 2006).

3.2. Role of the official inspections

Overall, the impact of official control was considered valuable for food safety, since 78.8% (308/391) of the respondents evaluated that the actions taken based on inspections had clearly or somewhat enhanced the safety of the products and 87.8% (387/441) believed that the actions had clearly or somewhat enhanced the overall hygiene of their plant (Table 2). The opinion that the local inspector is familiar with the principals of the production process was significantly correlated with the opinions that the operations following the official food control had enhanced the safety of the products ($r = 0.337, P < 0.001$) and improved hygiene in production ($r = 0.294, P < 0.001$). In the event the FBOs considered the inspector to be familiar with the process, they also commented that the inspector had clearly specified the noncompliances detected ($r = 0.189, P < 0.005$). Of the respondents, 47.4% (231/487) stated

Table 1
FBOs responding to the survey, grouped by the type of production.

Type of production	Number of respondents (%)
Slaughterhouses	21 (4.3)
Other EU-level meat plants	66 (13.5)
Small-scale slaughterhouses	39 (8.0)
Other small-scale meat plants	89 (18.2)
Fish plants	137 (28.0)
Milk plants	49 (10.0)
Egg-packing plants	44 (9.0)
Storage facilities for food	38 (7.8)
Not defined	7 (1.4)
Total	490 (100.0)

Table 2

Opinions of food business operators on the influence of official control. The 'don't know' answers have been classified as missing values.

Statement	Opinions, no. (%)		
	Clearly	Somewhat	Not at all
Actions taken based on official control have enhanced the level of food hygiene in production	133 (30.2)	254 (57.6)	54 (12.2)
Actions taken based on the inspections have enhanced the safety of the products	75 (19.2)	233 (59.6)	83 (21.2)
Discussions with the local inspector have helped to understand the food hygienic risks in production	172 (38.4)	227 (50.7)	49 (10.9)
Actions taken based on the inspections have hindered the production	48 (12.1)	155 (38.9)	195 (49.0)

that the first source of information concerning new food safety regulations was the local inspector. The other main sources of information were Evira (32.9%, 160/487) and professional magazines (18.1%, 88/486).

3.3. Attitudes towards noncompliances

The orders and instructions given by the authorities were evaluated as clear and easily understandable ('always or often') by 90.8% of all the respondents, and according to 91.5% of the FBOs the inspector clearly showed the noncompliances that needed to be corrected (Table 3). About half (48.7%) of the respondents considered that the noncompliances associated with the operations were relevant to product safety and 37.5% of the respondents saw the noncompliances associated with the facilities as relevant to product safety (Table 3). Of the FBOs, 62.9% considered it economically difficult to correct the noncompliances detected by the inspector (Table 3).

The opinion that correction of the noncompliances was economically difficult correlated significantly with the opinion that the inspector was not familiar with the production processes ($r = 0.223$, $P = 0.009$) and had not given adequate guidance in implementing the legislation ($r = 0.169$, $P < 0.001$). When the FBOs stated that correction of the noncompliances was economically difficult, they also responded that the actions taken based on the

Table 3

Opinions of food business operators on the official control, evaluated on an original scale of 'always, often, seldom or never'. The 'don't know' answers have been classified as missing values.

Statements concerning the official food control inspections	Always or often no. (%)	Seldom or never no. (%)
Orders and instructions given by the inspector are clear and easily understandable	425 (90.8)	43 (9.2)
Inspector has clearly shown the noncompliances needing repair	409 (91.5)	38 (8.5)
Negotiations about the noncompliances are conducted with the inspector	427 (91.6)	39 (8.4)
Inspector has given a written report on the inspections	436 (92.8)	34 (7.2)
Noncompliances detected by the inspector associated with operations have been relevant to product safety	220 (48.7)	232 (51.3)
Noncompliances detected by the inspector associated with the facilities have been relevant to product safety	163 (37.5)	272 (62.5)
Correcting the noncompliances detected by the inspector has been economically difficult	169 (37.1)	286 (62.9)
Deadline has been given to correct the noncompliances	391 (86.7)	60 (13.3)

Table 4

Responses to yes/no statements, concerning the usefulness and conformity of local official control. The 'don't know' responses were classified as missing values.

Statement	Positive responses %, (n/N)
More legislative guidance would have been needed in planning the self-checking system	33.1 (161/486)
More legislative guidance would have been needed in building or renovating the facilities	15.4 (75/486)
More legislative guidance would have been needed in correcting the non-compliances detected	11.1 (54/486)
The comments of the inspector have been used in improving the self-checking system	78.0 (373/478)
The comments of the inspector have been used in planning the production facilities	39.7 (190/478)
The comments of the inspector have been used in planning the correcting operations	44.1 (211/478)
The comments from the inspections have not benefited the plant	10.7 (51/477)
Changes have been made in manufacturing processes based on the inspectors comments	28.2 (112/397)

control had complicated the production processes ($r = 0.433$, $P = 0.023$). A significant correlation was also noted between experiencing the correction of the noncompliances as financially difficult and finding the deadlines to do the corrections as too short ($r = 0.341$, $P < 0.001$).

3.4. Significance of the guidance and negotiations

A total of 89.1% (399/448) of the respondents admitted that the discussions with the local inspector had at least somewhat helped them to understand the risks associated with the processes. In cases where the risk points in the production had been assessed together with the inspector, the FBOs also saw the relevance of the non-compliances in the facilities to the safety of the products ($r = 0.166$, $P = 0.001$), perceived that the non-compliances had been clearly shown by the inspector ($r = 0.203$, $P < 0.001$) and admitted that the actions taken had enhanced the safety of the products ($r = 0.217$, $P < 0.001$).

In all, 33.1% of the FBOs considered that they would need more guidance on legislation in planning the self-checking system, but only 15.4% considered that more legislative guidance would have been needed concerning building or renovating the facilities (Table 4). The opinion that the inspector gave adequate guidance on legislation also correlated significantly with the opinion that the actions taken based on the official control had enhanced the safety of the products ($r = 0.286$, $P < 0.001$). A total of 78.0% of the FBOs utilized the comments given by the inspector to improve their self-checking system (Table 4). The opinion that the inspector gave adequate guidance on legislation correlated significantly with the statement that the instructions and requests given by the inspector were seen as clear and easy to understand ($r = 0.367$, $P < 0.001$) and that the FBOs considered the noncompliances noted to be relevant for product safety ($r = 0.268$, $P < 0.005$).

3.5. Impact of the production type of the FBO

In grouping the respondents based on the production type of the FBOs, as presented in Table 1, significant differences were noted

between the groups. Evaluating the food safety risk associated with production differed significantly among the different types of FBOs (Kruskall–Wallis, $P < 0.001$); all of the slaughterhouses that represented the large-scale FBOs considered that there were food hygienic risks in their production. In other production types, there was a varying proportion of the FBOs that did not recognize any food safety risks in their production (Fig. 1). Of the fish plants, only 21.1% (27/128) recognized a clear possibility for food hygienic risks and 14.8% (19/128) suggested that there would have been no risks at all. In cases where the FBOs evaluated that there were food safety risks associated with production, they also felt that the actions taken based on the inspections enhanced the safety of the products ($r = 0.255$, $P < 0.001$).

The groups differed significantly in their opinions concerning the deadline given for correction of the noncompliances (Kruskall–Wallis, $P = 0.016$); the deadline was seen as too short most frequently by the small-scale slaughterhouses (27.0%, 10/37) and the fish plants (15.7%, 18/115). There were also differences between groups in opinions about whether the actions taken based on the official control had enhanced production hygiene ($P = 0.026$), although in all groups the largest proportion responded that production hygiene had somewhat increased through the control procedures. The opinion on whether correction of the noncompliances had been economically difficult also varied significantly between the groups ($p < 0.001$), the slaughterhouses (52.6%), small-scale slaughterhouses (45.9%) and fish plants (43.3%) responding most often that they faced economic difficulties ‘always or often’. A total of 28.6% of the small-scale slaughterhouses considered that the actions taken based on official control clearly complicated the production processes, whereas the percentage within other types of plants varied between 3.3% and 17.9%.

3.6. Impact of the size of the FBO

In grouping the respondents based on the size of the FBOs, there were significant differences between the groups in four statements. The groups differed in evaluating the food safety risk associated with the production (Kruskall–Wallis, $P = 0.002$); the bigger the FBO, the more clearly it seems to perceive the food safety risks associated with its function ($r = 0.127$, $P = 0.009$).

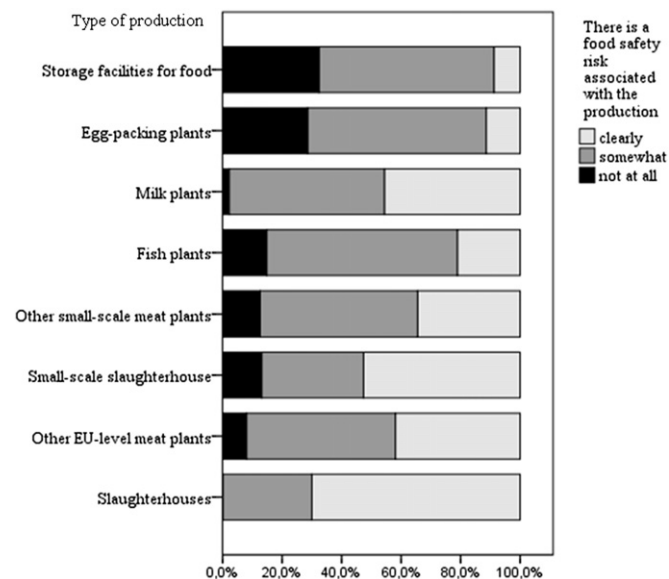


Fig. 1. Food business operator's estimations of food safety risk within their production, grouped by the type of production.

Having a deadline for the corrections seemed to vary, based on the size of the FBOs (Kruskall–Wallis, $P = 0.017$): 25.0% of the large FBOs claimed that the deadline was given seldom or never, while for the smaller FBOs the percentage varied between 8.3% and 11.7%. The responses to the statement that the inspector gave adequate legislative guidance also varied significantly between the groups (Kruskall–Wallis, $P = 0.012$), only 25.0% of the medium-sized FBOs totally agreeing with the statement and 12.5% totally disagreeing. Of the micro-sized, small and large FBOs the percentage for totally agreeing on having enough legislative guidance was 50.6%, 38.5%, and 31.3%, respectively. The percentages for micro-sized, small, and large FBOs totally disagreeing with the statement were 6.0%, 3.8% and 6.3%, respectively. The groups also differed in their opinion on the statement ‘Discussions with the local inspector have helped the FBO to understand the food safety risks associated with production’ (Kruskall–Wallis, $P = 0.002$), the micro-sized establishments agreeing with this statement most often (44.8%, 116/259).

The bigger the FBO, the more it considered that the noncompliances of the facilities, as pointed out by the inspector, were relevant to product safety ($r = 0.161$, $P = 0.005$). The bigger the establishments, the more often they also negotiated with the inspector about the noncompliances ($r = 0.257$, $P < 0.001$). If negotiations were conducted concerning the noncompliances in association with each inspection visit, the instructions given by the inspector were seen as clear and understandable ($r = 0.222$, $P < 0.005$) and the FBOs felt that the noncompliances were clearly pointed out by the inspector ($r = 0.461$, $P < 0.001$).

The size of the FBO reflected the effort put into the self-checking system. In the group of micro-sized establishments, 19.3% (53/275) responded that they did not have a person named as responsible for the self-checking system. In small establishments, the percentage was 3.8% (4/106) and in medium-sized 2.5% (1/40). Large companies always had a person particularly named as responsible for the self-checking system, and in 68.8% (11/16) of cases this person was responsible full time and in 31.3% (5/16) of the cases part time for self-checking.

3.7. Frequency and conformity of inspections

The more often the official inspections by the local inspector were performed, the more often the FBOs saw that the noncompliances detected by the inspector were significant in enhancing product safety (Table 5). A significant correlation was also noted between more frequent inspection visits and negotiating about the noncompliances detected with the inspector ($r = 0.558$, $P < 0.001$) (Table 5).

A total of 80.1% (197/246) of the FBOs considered that the demands set by the local authority were equal for all FBOs at the same geographical area, and 63.5% (162/255) of the FBOs considered that the demands set by the authority are equal compared with other similar FBOs in Finland. A significant correlation was noted between a low inspection frequency and considering the demands set by the local authority were equal at the same area ($r = 0.02$, $P = 0.006$) or at the national level ($r = 0.233$, $P = 0.001$).

4. Discussion

The results highlight the importance of official food control in food safety from the FBOs' point of view, since nearly 90% of the respondents considered that the actions taken, based on inspection visits, enhanced the hygiene of their plant. A correlation between the inspector being familiar with the production processes and the FBOs seeing the operations following the official food control as having enhanced the safety of the products reflects the importance of the inspector being acquainted with the production processes. In

Table 5

Spearman's rank order correlation statistics on the higher inspection frequency and FBOs' opinions on the relevance of official food control and negotiations with the inspector.

	Spearman's correlation statistics	Non-compliances associated with the self-checking documentation have been relevant to product safety	Non-compliances associated with the facilities have been relevant to product safety	Non-compliances associated with operations have been relevant to product safety	Negotiations are carried out concerning the noncompliances detected
Higher inspection frequency of the local official inspector	Correlation coefficient 2-tailed sig. N	0.119 0.028 339	0.133 0.015 331	0.130 0.015 348	0.558 0.000 361

being familiar with the production processes, the inspector also seems able to specify the noncompliances more clearly to the operator. The educational background of the inspector may also influence on the level of familiarity with the production processes. Overall, it was stated that the orders and instructions given by the authorities were mainly clear and easily understandable.

More than half of the respondents considered it economically difficult to correct the noncompliances detected by the inspector. This opinion correlated significantly with the inspector not being familiar with the production processes or having not given adequate guidance in implementing the legislation. Considering that a causal connection exists between these factors, it reveals the possibility that dissatisfaction with the inspector may strengthen the FBOs' experiences of financial burden. This emphasizes the need for familiarization with the processes and giving adequate legislative guidance to influence the attitudes of the FBO. Thus it helps the FBO to be committed to food safety issues and raises the awareness of food safety risks. The deadline given for correcting the noncompliances should also be long enough to reduce the financial burden, unless it is a question of a serious health hazard.

The guidance was seen overall as a highly relevant factor. Almost 90% of the respondents admitted that discussions with the local inspector had at least somewhat helped them to understand the risks associated with the processes. Going through the risk points in the production together with the inspector and by giving adequate guidance on legislation, the inspector seemed to help the FBOs understand the relevance of correcting the noncompliances for the safety of the products. When given adequate guidance on legislation, the FBOs also considered the instructions and requests given by the inspector clear and easy to understand, which, in turn, enhanced the FBOs' ability to understand the noncompliances and the relevance to do the corrections. The FBOs also saw the local inspector as the most important source of new information concerning food safety legislation. In sharing information concerning new regulations, the inspector may also influence the FBOs' understanding of the enhancement of product safety.

Surprisingly, only about half of the FBOs stated that the noncompliances associated with the operations were always or often relevant to product safety and only 37.5% of the respondents saw the noncompliances associated with the facilities as always or often relevant to product safety. This means that a marked percentage of the FBOs do not understand the risk that the noncompliance sets for food safety or that the noncompliances in question were truly minor; thus the direct effect on food safety has been difficult to determine. Assessing the risk points together with the inspector would help the FBOs to see the relevance of the noncompliances. In some cases the evaluation of the noncompliances by the inspector as being relevant in terms of food safety, may yet vary due to the diversity in the educational background of the inspectors. The corrections of the noncompliances related to facilities are often the most expensive ones to accomplish, which, in turn may affect the perceptions on the true need for the corrections by the FBOs.

The actions taken based on the control were in some cases seen as complicating the production process and in those cases also

considered as economically difficult. The meat and fish plants experienced most frequently that correction of the noncompliances was economically difficult, whereas higher proportions of the milk plants, egg-packing plants and storage facilities perceived that there were no economic difficulties in correcting the noncompliances. The extensive legislative demands set for the meat and fish plants in comparison to the other types of production may be more challenging to reach and the financial burden may thus be greater for these establishments.

There seems to be some failure in recognizing food safety risks as related to production among the plants. All the large slaughterhouses saw the risks in their production, but in other categories of FBOs there was a certain proportion that did not recognize any risks. The most interesting group of FBOs in this sense were the fish plants. They are well known to present a high risk for certain pathogens in the production chain, such as *Listeria monocytogenes* (Autio et al., 1999; Lianou & Sofos, 2007). However, only 21% of the fish plants clearly recognized a food safety risk associated with their production. Of the meat plants other than slaughterhouses, several also saw their production and operations as risk-free.

The bigger the FBO, the more clearly it seemed to perceive the food safety risks. Bigger FBOs also considered that the noncompliances of the facilities pointed out by the inspector were really relevant to product safety. It seems that the bigger operators with presumably broad distribution of products saw more clearly the possibility of losing their market share. They may also have more educated personnel working with the food safety issues and could have more often implemented a full-scale hazard analysis and critical control point (HACCP)-system. An employee responsible for self-checking full time was typical of the large FBOs. In the smaller FBOs, no employees were necessarily responsible for the self-checking system, indicating that the food safety risks in production were not adequately taken into account. The low interest in food safety issues may also lead to minor investment in food safety training of the personnel. The result indicates the need for further education of FBO personnel in the risks within the food production processes and the ways of managing them.

Documentation is a crucial part of the self-checking system and the importance of documentation was previously emphasized in a survey by Walker and Jones (2002), showing that the standards of hygiene are better during preparation and cooking in premises with documented hazard analysis systems than in those without. Record keeping may easily be neglected in small- and medium-sized food businesses, at least if the person responsible for the operation is lacking. In a survey by Walker, Pritchard, and Forsythe (2003), only 65% of the 102 FBOs kept some form of records and the majority did not understand the importance of documentation other than the request from the health officer. On the other hand, in this survey the micro-sized FBOs agreed most often that the discussions with the local inspector had helped them understand the food safety risks associated with production; thus it seems that the inspector would have opportunities to enhance the knowledge of the risks.

The more frequent the visits by the official inspector were, the more positively it seemed to influence to the FBOs' attitudes towards the control. Through frequent, e.g. monthly or more

frequent inspection visits, the inspector was able to acquaint him/herself with the processes, discuss possible problem areas in production and give the legislative guidance needed. This, in turn, results in mutual understanding of the noncompliances detected and helps the FBO to see the relevance for food safety in correcting these noncompliances. Inadequate resourcing of food control may lead to less frequent inspections, which, based on our results, may weaken the efficacy of control. The higher municipal inspection frequency also correlated positively with the FBO's perception of nonconformity. It may reflect that the respondents whose establishment is inspected may often feel that they are under special supervision. However, the number of responses in the questions regarding the equity of the inspections was low, with only about half of the FBOs answering, indicating that they are rarely familiar with the inspections in other FBOs, even in the same area.

Based on the results, it seems that the authorities are able to give clear and understandable instructions and are able to clearly show the noncompliances to be corrected. However, a difference between large and small establishments was noted in negotiating about the noncompliances, the larger FBOs stating that negotiations were conducted, while the smaller ones believed that they had no opportunity to negotiate concerning the noncompliances. This raises the question of a possible lack of consistency in treatment of the FBOs. The negotiations seemed to positively influence the understanding of the noncompliances as well as the instructions given by the inspector, and could thus be considered a way of motivating the FBOs to carry out the corrective actions needed.

5. Conclusions

This study revealed the importance of official food control from the perception of FBOs. It also underlines the importance of adequate communication between the FBO and the official inspector and the need for guidance as well as education on food safety issues. To enhance the impact of official food control, the

positive effect of higher inspection frequency should be emphasized.

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