

IOP Conference Series: Earth and Environmental Science

PAPER • OPEN ACCESS

Food safety – the roles and responsibilities of different sectors

To cite this article: N Karabasil *et al* 2017 *IOP Conf. Ser.: Earth Environ. Sci.* **85** 012023

View the [article online](#) for updates and enhancements.

Related content

- [Laser Safety: Safety culture and laser program management](#)
K Barat
- [Challenge To Enforce Food Safety Law and Regulation in Indonesia](#)
Stephanie Apsari Putri
- [Assessment of good manufacturing practice for small scale food industry in Malang region, East Java, Indonesia](#)
I Purwantiningrum, W Widyahastuty, J Christian *et al.*

Recent citations

- [Marginal, localized and restricted activity](#)
Nina Drejerska *et al*

Food safety – the roles and responsibilities of different sectors

N Karabasil¹, T Bošković², M Dimitrijević¹, D Vasilev¹, V Đorđević³, B Lakićević³, V Teodorović¹

¹ University of Belgrade, Faculty of Veterinary Medicine, Department of Food Hygiene and Technology, Bulevar oslobođenja 18, Belgrade, Serbia

² Ministry of Agriculture and Environment, Veterinary Directorate, Food Safety Unit, Nemanjina 22-26, Belgrade, Serbia

³ Institute of Meat Hygiene and Technology, Kačanskog 13, Belgrade, Serbia

E-mail: nedja@vet.bg.ac.rs

Abstract. Serbia is a relatively small country but with a long tradition in food production, especially meat and meat products. Serbia, as part of its open negotiation process as a candidate country with the European Union (EU), started to harmonise its legislation with the EU, and has published a set of laws and regulations relating to the hygiene of food production and food safety, the official control of production and the welfare of animals. Therefore, the food safety system in Serbia is based on principles established in the EU. There is a need for cooperation of different sectors (government, food business operators and consumers) in the management of food safety, and every sector has its role and responsibility. This paper aims to provide analytical support for the process of upgrading safety and quality in Serbia's food sector and explains the roles and responsibilities of different sectors in the food chain.

1. Introduction

Serbia is a relatively small country but with a long tradition in food production, especially meat and meat products [1,2]. In the period of pre-accession to the European Union (EU), Serbia, as a candidate country, is required to adopt a strategy for implementation of EU food hygiene standards in establishments for the production of food of animal origin. The National Programme for the upgrading of establishments should enable the food business operators (FBOs) covered by the National Programme to fulfil new legal requirements and to continue their operations in an equal and competitive manner on internal and on EU markets.

The principal objective of the new food hygiene rules is to ensure a high level of consumer protection with regard to food safety [1,3]. Every FBO along the food chain should ensure that food safety is not compromised. With regard to public health, these rules and procedures contain common principles, in particular in relation to the manufacturers and competent authorities' responsibilities, structural, operational and hygiene requirements for establishments, requirements for storage and transport and procedures for registration and approval of establishments.

This paper aims to provide analytical support for the process of upgrading safety and quality in Serbia's food processing sector, briefly describes the current level of compliance of the Serbian regulation with the EU, and the means of implementation and enforcement, and as well as, particularly, roles and responsibilities of different sectors in the food chain.



2. Analysis of the legal framework

Serbia, as part of its open negotiation process with the EU, started to harmonise its legislation with the EU, and has published a set of laws and regulations relating to the hygiene of food production and food safety, the official control of production and the welfare of animals. Requirements in the areas of food safety are set out in Chapter 12 of the EU *acquis* (Food Safety – Veterinary – Phytosanitary Policy), which is an integrated approach “from farm to fork” to ensure a high level of public health, animal health, animal welfare and plant health. The applied system of binding measures in the entire chain of primary production, processing and distribution of food to the consumer, as well as the appropriate methods of controls, provide a high level of protection of human life and health as the main objectives.

The food safety system in Serbia is based on principles established in the EU. The primary laws that form the backbone of the food safety system in Serbia are the Law on Food Safety (Official Gazette of the Republic of Serbia, No. 41/09), Law on Veterinary Matters (Official Gazette of the Republic of Serbia, No.91/05, 30/10, 93/12) and Animal Welfare Law (Official Gazette of the Republic of Serbia, No.41/09) [4-6].

Serbia has adopted general and specific rules on food hygiene which is partially (almost completely) in line with the EU’s Hygiene Package.

2.1. The Law on Food Safety

The Law on Food Safety [5] defines the general conditions for the safety of food and feed, duties and responsibilities of food and feed business operators, rapid alert system, emergency measures and crisis management, as well as food and feed hygiene and quality. The purpose of this Law is to provide a high level of protection of human life and health and protection of the consumers’ interests, including the principle of honesty and scrupulousness in the food circulation. It should also take into account whenever possible the protection of the health and well-being of animals, as well as the health of plants and environmental protection.

The provisions of this Law do not apply to primary food production and preparation, handling and storage of food for private domestic use, nor to feed for non food-producing animals. This Law also restricts the production and circulation of food and feed to legal persons or entrepreneurs that are recorded with the Register of Economic Operators and the Register of Facilities/Establishments kept by the Ministry of Agriculture.

2.2. The Law on Veterinary Matters

The Law on Veterinary Matters [4] defines the protection and enhancement of animal health and welfare; it identifies animal infectious diseases and measures for prevention, detection, containment, control and eradication of infectious diseases and diseases that can be transmitted to humans, veterinary-sanitary/official control and conditions under which animals and animal products, food of animal origin and animal feed may be produced and distributed.

The Law on Veterinary Matters is particularly focused on general and specific hygiene conditions in establishments for production of food of animal origin, covering the following areas: slaughtering the animals; production and processing of food of animal origin (e.g. cutting meat, processing); and distribution of food of animal origin on wholesale and retail level, including storage.

Veterinary Law defines the procedure for approval of establishments’ producing/processing/storage of food of animal origin, including the obligation that all establishments handling food of animal products have to be registered in the Register of Establishments or in the Register of Approved Establishments.

In addition, there is a legal basis for the adoption of detailed rules prescribing the types of facilities that are registered or approved, methods and procedures of registration and approval of establishments, as well as the form of application for registration of registered or approved facilities. There is also a legal basis for the adoption of regulations that speak to the approval process for establishments that export products, according to the national veterinary and food hygiene

requirements and specific requirements of the importing country. These two regulations should be drafted and adopted soon.

2.3. The Animal Welfare Law

The Animal Welfare Law [6] regulates animal welfare, rights, obligations and liability of legal entities and individuals, and entrepreneurs for the benefit of animals, treatment of animals and the protection of animals from abuse, protection of animal welfare during slaughter and killing, keeping, breeding, transport, slaughter and conducting experiments on animals, as well as other issues important for the protection of animal welfare.

3. Food sectors – roles and responsibilities

According to the Codex Alimentarius Commission, the definition of safe food is that “food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use” [7]. Food is considered safe when it is evidenced that all measures have been taken to prevent contamination. In the 21st century, there is a need for cooperation between different sectors in the management of food safety. There are roles and responsibilities for each sector: government, FBOs and consumers [8].

3.1. Government and Regulatory Bodies

Government and regulatory bodies have the key role in food safety management from the primary production until the consumption [8-9]. This sector has to adopt and enforce legislation, with the food safety and public health issue as a priority. There should be transparent approach and provision of advice to producers.

The Ministry of Agriculture and Environmental Protection and the Veterinary Directorate are prepared to promote the improvement of hygiene standards in the establishments in the area of Veterinary Public Health. This strategic approach and consistent enforcement of decisions should prevent the closure of a high number of establishments, which would have a negative impact on the national economy and social status of the employees in the area of production, processing and trade of food of animal origin, especially in the meat sector. The harmonisation process in these areas with the EU legislation requires that the Serbian competent authority adapts its legal system to ensure the full implementation of EU regulations, which includes official inspection authorities, provision of relevant sources of information and data for risk assessment, as well as competent laboratory capacities and accredited test methods. The obligation of transposition and harmonisation of legislation also includes that all FBOs and inspection authorities to have implemented and maintained continuous improvement on the relevant knowledge and skills necessary to perform tasks from their activities and competence.

Communication with the consumers is very important and education of this sector is part of the government responsibility. One of the good examples is the Food Safety Council, which has to provide advice to the government sector in the area of risk assessment, but as well as to provide consumers with information about the possible risks. Risk assessment includes information such as scope, food sector, type of food, type of products, target population, scientific opinion, preparation of reports and the method of presenting data.

3.2. Food business operators

FBOs have a responsibility to put on the market product which will not have a negative effect on consumer [8,10-14]. They have to operate in hygienic environments, including processing, storage, transport/distribution. In ensuring food safety of the product, they should comply with appropriate criteria, like microbiological criteria for biological hazards, adequate labelling, have under control specific processing step in the flow diagram of production to be sure that the hazard as the potential risk is eliminated and as well recall a product in the case of an incident. FBOs have to implement the regulatory requirements, code of good manufacturing/hygiene practice and HACCP as a good methodology in ensuring food safety issue.

For a small country, Serbia has a large number of facilities for the production of food of animal origin, especially meat and meat products. Unfortunately, only a few meet all regulatory requirements and have been approved for export to the EU. Most of the establishments predominantly sell on local markets, are an important resource for supplying food of animal origin and employ a significant workforce for their processes. It speaks to the fact that food made by small producers can have an impact on a large number of consumers. Therefore, the processes of hygiene management and HACCP principles are critical in ensuring safe products. Serbia has started the development of national legislation and/or procedures and guidelines for FBOs with direct sales to final consumers and establishments covered within the definition of marginal, localised or restricted businesses, and likewise in the area of flexibilities and derogations for low capacity establishments and traditional methods of production.

3.3. Consumers

Consumers have an equally important role as the previous two sectors [8]. Sometimes, consumers in Serbia do not have enough information and/or adequate education about the food products of animal origin or their stability. There should be an improvement in consumer education about their role in food safety. Consumers have to apply good hygiene practice in food preparation and carefully read and understand the information given by the FBOs on food labels.

References

- [1] Karabasil N, Boskovic T, Dimitrijevic M, Vasilev D, Teodorovic V, Ilic N. and Djordjevic, V 2015. Food hygiene – Flexibility in traditional and small meat establishments. *Procedia Food Science* **5** 140-43.
- [2] Serbia 2015 Statistical Yearbook of the Republic of Serbia (Chapter Agriculture) *Statistical Office of the Republic of Serbia* Belgrade.
- [3] Moy G G and Motarjemi Y 2014 Public Health Measures: International Standards and Harmonization of Food Safety Legislation. *Encyclopedia of Food Safety* Waltham: Academic Press 39-45.
- [4] Serbia 2005 Law on Veterinary Matters Official Gazette of the Republic of Serbia No. 91/05, 30/10 and 93/12 Belgrade.
- [5] Serbia 2009a Food Safety Law Official gazette Republic of Serbia No. 41/09 Belgrade.
- [6] Serbia. 2009b Animal Welfare Law Official Gazette of the Republic of Serbia No. 41/09 Belgrade.
- [7] CAC/RCP 1969 General Principles of Food Hygiene Codex Alimentarius Commission 1-1969, rev. 2003.
- [8] Motarjemi Y and Lelieveld H. 2014 Chapter 1 - Fundamentals in Management of Food Safety in the Industrial Setting: Challenges and Outlook of the 21st Century Food Safety Management. San Diego: Academic Press 1-20.
- [9] Boström M, Jönsson A M, Lockie S, Mol A P J and Oosterveer P 2015 Sustainable and responsible supply chain governance: challenges and opportunities. *Journal of Cleaner Production* **107** 1-7.
- [10] Smigic N, Antic D, Blagojevic B, Tomasevic I and Djekic I 2016 The level of food safety knowledge among meat handlers. *Brit. Food J.* **118**(1) 9-25.
- [11] Tomasevic I and Djekic I 2016 HACCP in Fermented Meat Production. In N. Zdolec (Ed.), *Fermented Meat Products: Health Aspects* 512-34 CRC Press.
- [12] Tomašević I, Šmigić N, Đekić I, Zarić V, Tomić N and Rajković A. 2013. Serbian meat industry: a survey on food safety management systems implementation. *Food Control*, **32**(1), 25-30.
- [13] Henderikx F. 2017 Labelling of food: a challenge for many *Veterinarski Glasnik* **71**(1) 16-23.

- [14] MAEP 2015 Registry of Approved Establishments in the Veterinary Directorate. *Ministry of Agriculture and Environmental Protection*, Republic of Serbia.