MANAGEMENT OF COMBATING FOOD FRAUD IN THE FIELD OF PUBLIC CATERING

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Abstract

Food that is safe, made and declared nutritionally correct and free movement contribute significantly to the health and well-being of citizens and to their social and economic interests. This is essential for the EU internal market and food fraud prevention and detection policies make an important contribution to the exercise of this responsibility. The prevalence of food fraud can be explained by the complex nature of global food supply chains and the economic incentive to provide cheaper food. Fraudulent practices in the food sector can also lead to risks to public health.

This paper highlights the main strategies and measures to effectively combat food fraud in public catering in Romania. Due to the impact of food fraud issues on public health and consumer confidence, it is important to build and implement a system of appropriate prevention, control and improvement measures (SPCI - food fraud - PA). Raising awareness of the risks associated with food fraud, educating consumers and catering workers is the main pillar of the proposed system. Standardization of food quality and safety, monitoring of supply chains, transparency and exchange of information, cooperation between links in the food chain, and appropriate sanctioning of those involved in fraud, are key issues addressed in this paper. The development of a set of recommendations for consumers and operators lays the foundation for activities that will support the national plan to reduce food fraud. By implementing these strategies, we can develop a system that makes catering safer, more transparent, an economic sector that preserves product integrity and protects public health.

Key words: food safety, food fraud, catering, vulnerability plan, fraud audit

INTRODUCTION

Food fraud is a global problem with a significant impact on the food industry, affecting both public health and consumer confidence.

Food fraud occurs when someone intentionally alters either the food or supply chain to make a profit. This intention separates food fraud from failures in food safety and food quality. As an act of cheating, food fraud involves deliberately violating the rules laid down by the European Union. According to Spink and Moyer (2013) 'food fraud' is a collective term used to include knowingly and intentionally substituting, adding, manipulating, or misrepresenting food, food ingredients or food packaging; or making false or misleading statements about a product for economic gain'. Based on this definition, the key characteristics of food fraud are: 1) non-compliance with food law and/or misleading consumers, 2) committed intentionally and 3) committed for financial gain.

Food fraud is the collective term encompassing the intentional substitution, addition, counterfeiting or denaturing of food/feed, food/feed ingredients or food/feed packaging, labelling, product information or false or misleading statements about a product for economic gain, and which may impact on consumers' health (Certind, 2019)

Although it is often invisible to buyers, food fraud is a serious problem. Today's estimates of the global financial cost of food fraud range from $6.2 billion to $40 billion per year. And when food fraud threatens public health, people can lose their lives — for example, in the 2008 melamine milk scandal in China, six infants died and just over 50,000 were hospitalized because milk was deliberately adulterated to cut costs, while still passing quality control tests.

In the catering sector, managing such fraud is particularly important, as it can jeopardise food safety and lead to loss of reputation for businesses in the sector. This article analyses various management strategies and measures that public catering authorities and operators can adopt to effectively combat food fraud.

Types of food fraud

According to the EU-agreed definition, there are seven main types of fraudulent practices: substitution, dilution, counterfeiting, concealment, falsification (grey market), unapproved enhancement and incorrect labelling.

Substitution – replacing an ingredient or part of a high-value product with another ingredient or part of a lower value product, for example:

- marketing horsemeat as beef;
- mixing spices derived from aromatic herbs (e.g., oregano, saffron) with inedible plant parts;
- Dilution honeybees with sugar syrup or selling honey without pollen (honey is one of the most falsified foods, accounting for 7% of food fraud cases; 75% of honey bought from stores does not contain pollen;
- addition of melamine to powdered milk, eggs or soy products;
- addition to ground or instant coffee of other products (e.g., roasted maize, roasted barley, chicory powder, burnt sugar, etc.).

Dilutionmixing a high-value liquid ingredient with a low-value one, such as diluting superior oils (e.g., oil or truffle oil) with inferior oils (for example, corn oil) or even mineral oils.

Counterfeiting – copying brand name, packaging concept, recipe, food processing method for economic gains, such as

- sale of inferior wines under brand names;
- Mention on the label of the use of advanced technologies that guarantee product safety, such as Termoskin for sliced and packaged sausages (achieving vacuum conditions in the package at a pressure of 15 atmospheres), when in fact ordinary technologies were used.

Concealment – concealing the low quality of a product or food ingredient, for example: using technical alcohol (containing methanol) in spirit drinks, not mentioning or incorrectly stating the origin of an ingredient.

Counterfeiting (grey market) - purchase of food from markets, fairs, with very low prices, indicating their theft from established producers.

Unapproved upgrades – using unapproved materials to improve quality characteristics;

Incorrect labelling – placing false claims on packaging for economic gain, for example:

- marketing ordinary food as organic food;
- marketing road salt as food salt;
- marketing of black bread made from white flour with dyes;
- the labelling of fish of aquaculture origin as being fished in the wild or the marketing of a lower variety of fish under the name of a higher category or a more expensive species;
- incorrect indication of weight on labels;
- unfair use of quality logos indicating the origin or welfare of animals;
- adulteration and marketing of food after its expiry date.

Unauthorized exaggeration – selling foods with mention of miraculous healing powers.

The motivation that determines the occurrence of food fraud is substantiated by several factors,

- inefficiency of intellectual property legislation that would prevent counterfeiting;
- high profitability, generated by reducing production expenses and increasing income from the apparent value of the product;
- the abundance of raw materials, materials, and equipment, increasingly evolved and cheaper, which facilitate reproduction;
- low purchasing power of the population, who prefer to buy counterfeit products, cheaper, original ones.

The forms of food fraud presented, as well as its determinants, allow to declare that it will never be fully eliminated. This requires rigorous control systems focused on considerably reducing the risk of fraud.

Food fraud in the catering sector

According to specialized sources, the first concerns in the field of food date back to the Byzantine and Roman empires. In Rome, in the Thermopoliums were organized salons where hot dishes and drinks were served", First restaurants" were medieval taverns and taverns. Taverns usually provided customers with regular food during the day, and service was made at fixed hours and fixed prices. In the sixteenth century, Englishmen belonging to all social classes began to eat out with great frequency. Meals were served in taverns, which demanded fixed prices for food, wine, beer, and tobacco.

The word "restaurant" appeared in the sixteenth century and meant a food that quenched hunger, a rich and consistent concoction, capable of restoring strength. Brillat-Savarin considers chocolate, red meat and consume as "restorative forces"3. The menu, to inform and see what you can eat, has been around for about 200 years. (Dan Lia, 2017)

And in the food service sector, food fraud is the practice of deliberately substituting, modifying, or denaturing food, often to increase profits or hide illegality. While food adulteration is not a new concept, in recent years, news outlets have been filled with stories about popular products containing unknown variables. In 2013, Ikea was forced to recall its Swedish meatballs from cafeterias across Europe after horse meat was detected in some batches. In February 2016, Bloomberg rocked the nation with the headline: "The Parmesan cheese you sprinkle over your pasta. it could be wood – Some brands promising 100% purity didn't contain Parmesan cheese at all." From spices to fruit juices, food fraud has penetrated most people's homes.

According to Oceana's 2015 report, 20% of the more than 25,000 seafood samples tested worldwide were mislabelled. Snapper (87%) and tuna (59%) were regularly exchanged for lower-quality, less expensive fish. Farmed Asian catfish were sold instead of 18 different types of more expensive fish, such as perch, cod, lipa, lipa and group. Some of the most shocking cases of fraud occurred in the US, where less than 1% of imported seafood is inspected for fraud. In a New York grocery store, blue-line fish — which is on the Food and Drug Administration's "Do Not Eat" list because of its high mercury content — was relabelled and sold as both "red snapper" and "Alaska halibut."

In the U.S. alone, 74 percent of seafood tested at sushi restaurants was mislabelled, 38 percent of seafood at non-sushi restaurants was mislabelled, and 18 percent of seafood sold in grocery stores was mislabelled.

MATERIALS AND METHODS

Education and awareness - one of the most effective ways to combat food fraud in the field of public catering is to increase the level of education and awareness among consumers, but also among industry staff. This involves informing about the risks associated with food fraud, recognising the characteristic signs of counterfeit or adulterated products, and promoting correct and transparent food labelling. To effectively combat food fraud in the catering industry, it is necessary to increase the level of education and awareness among both consumers and industry staff. This involves providing information on the risks associated with food fraud, being able to recognise the

characteristic signs of counterfeit or adulterated products and promoting fair and transparent labelling of food.

One of the first important aspects to effectively combat food fraud is to educate and raise awareness among consumers and industry staff. Consumers must be informed about possible risks and techniques used in food fraud so that they can make informed choices and avoid denatured or dangerous products. Just as importantly, industry personnel need to be trained and aware of the risks and signs of food fraud so they can identify and prevent these situations.

Implementing quality and food safety standards – **Establishing strict quality and food safety standards** can help prevent fraudulent products from entering supply chains. Governments and regulators should develop and enforce clear and rigorous regulations in this regard, and food business operators should be responsible for implementing and complying with these standards. Creating and enforcing high quality and food safety standards can help prevent fraudulent products from entering supply chains, governments and regulators should develop and implement clear and strict rules in this regard, and those in the food industry should be responsible for enforcing and complying with these standards.

Both the food and catering industries must have strict food quality and safety standards, covering aspects such as correct labelling, origins and ingredients used in products and their testing in accredited laboratories. By implementing these measures and specific standards, it can be ensured that the food marketed is authentic and safe for consumption. Monitoring supply chains is also essential in the fight against fraud.

Monitoring and controlling supply chains – food fraud management must include rigorous monitoring of supply chains to identify and prevent potential problems. The use of product tracking and labelling technologies, as well as regular audits of suppliers, can help ensure the

integrity of food supplied to the public food industry. Monitoring and controlling supply chains is an essential component to combat food fraud. These measures are crucial to ensure that food products reach consumers with their integrity and authenticity intact. Here are some key facts about how monitoring and controlling supply chains helps fight food fraud:

- **Supplier selection and monitoring**: Food business operators should conduct regular audits of suppliers to ensure they meet food quality and safety standards. By checking sources of supply, potential sources of fraud can be identified, and preventive intervention can be taken.

- **Traceability and correct labelling:** Modern technologies such as QR codes, smart labelling or blockchain allow detailed tracking of each product throughout the supply chain. It provides transparency and a source of authentic information, reducing the risk of counterfeit or adulterated products reaching the market.

By monitoring the entire supply chain, from producers to traders, it is possible to identify and prevent situations where food is adulterated or spoiled. Using technology such as electronic tracking and data analysis can help detect and address these issues effectively.

Product expertise in the laboratory - conducting tests and analyses in specialized laboratories can reveal the presence of unwanted substances or fraudulent ingredients in food. It can serve as an effective method of detecting fraud before it reaches the hands of consumers.

Customs surveillance and border controls –governments and regulators can carry out thorough controls at borders and points of entry to prevent fraudulent food from being placed on the market.

Exchange of information between authorities and industry -cooperation between authorities and food business operators, as well as exchange of information, can contribute to the rapid identification of fraud schemes and the

implementation of appropriate measures to prevent and combat them.

Collaboration and exchange of information - authorities, producers and operators in the food industry and catering should collaborate and share information to identify and combat food fraud more effectively. The exchange of relevant data and joint analyses can help identify fraud schemes and implement measures to prevent and combat them.

Punishing offenders – Another important component of food fraud management is ensuring appropriate punishment for those involved in such illegal activities. Severe penalties can deter potential offenders and build confidence in the safety of catering products.

Laws and regulations should provide for extreme penalties for those who engage in fraudulent practices in the food industry. By applying these sanctions, such behaviour can be uncovered and a safer and more transparent environment in the food industry can be promoted. By adopting these strategies and measures, a safer and more transparent food chain can be built, preserving product integrity and protecting public health.

Effectively combating food fraud is one of the priorities in terms of consumer health and safety. Building a management system that will manage adequate measures to prevent, control and improve food fraud (SPCI - food fraud - PA), integrated into the food safety management system, would be a long-term solution to reduce the risk of fraud in this vulnerable economic sector. At the same time, food fraud is an essential part of food safety, which is part of GFSI Benchmarking Requirements 2020 and certification standards recognized by GFSI: FSSC 22000, IFS Food, BRC Food Safety Global Standard Certification according to a GFSI recognized standard means compliance with international best practices, thus ensuring the delivery of safe products to the market.

Under the system adapted for the catering sector (SPCI - food fraud - PA) can establish the following types of actions:

- Building a training and awareness program for employees, suppliers, and customers on the effects of food fraud on society;
- Creating accessible databases with information about the motivations of food fraud, types of fraud, examples of incorrect practices leading to fraud, impact studies and statistics;
- Interpretation of the legislation in force, focusing on associated risks and punishment;
- Implementation of specific provisions and procedures, presentation of key elements of the company's plan for food fraud prevention;
- Elaboration of the plan to identify vulnerabilities and prevent food fraud;
- Establishing prevention strategy and measures, management involvement;
- Auditing vulnerabilities to food fraud;
- Permanent improvement of the food fraud mitigation management system.

CONCLUSIONS

Effective management of the fight against food fraud in the field of public catering requires concerted efforts on the part of authorities, industry, and consumers. Education and awareness, enforcing quality and food safety standards, monitoring supply chains, collaborating and sharing information, and punishing offenders are essential elements in the effort to protect public health and maintain the integrity of the food industry. By implementing these measures, we can build a safer and more transparent food industry for all consumers.

In conclusion, monitoring and controlling supply chains in the food industry and catering is a proactive and essential approach to effectively combat food fraud. By applying these measures, it can be ensured that food reaches consumers with guaranteed authenticity and safety, thereby protecting public health and building trust in the industry.

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