

Critical and Emerging issues in Food Safety and Quality-Lithuania

Critical issues are those that are the most pressing ones, and as such need to be addressed and considered as priorities. They can be known issues that are actually present/already occurring or even recurring. They can also be completely new or emerging. With the word “issues” is meant either hazards/challenges or opportunities or even trends that might have an impact on food safety and quality.

Emerging issues are those that are new, unexpected, or can cause change in the status quo. Many factors inside and outside the food production system(s) could directly and/or indirectly lead to emerging issues in food safety and quality.

Examples of “drivers of change” that could lead to emerging issues

- **Globalization of trade:** Food safety must be considered within a global context that is dynamic and evolving as part of the globalization process: increased international trade, more integrated markets, more rapid adoption of new technologies, increased market concentration, and information transfer, can all have important implications (both positive and negative) in food safety.
- **New distribution channels**
Increase in online retailers will eventually get to the food retail market; are there any food safety risks that might arise from such a change of the retail market, where the local store might be replaced with automated warehouses and logistics in distributing it to the end consumer?
- **Economic factors:** budgetary pressures on national governments to improve efficiencies and reduce spending on national food safety systems; the ability/ willingness of food enterprises to implement adequate food safety measures; trends in food adulteration and food fraud; fluctuation of food prices. All these, and many other economic factors can impact on food safety at different levels.
- **Climate change:** Climate change, perhaps the most compelling environmental issue of our time, can affect patterns of occurrence of food safety hazards. Indeed international commitment to address environmental issues has a significant impact on agricultural development strategies and on food safety
- **New technologies:** The increasing role of new and emerging technologies in food production, post-harvest treatment, processing, packaging and sanitary treatment is also significant in the context of food safety and more globalised food trade.
- **Scientific progress:** Technical and scientific innovation has multiple impacts on food safety and its management. More sensitive detection methods are providing new tools for investigating and indeed discovering new food safety hazards. Recent advances in food safety related sciences give us a better understanding of food-borne disease, and the role played by some food contaminants in the etiology of some pathologies and disorders.
- **Urbanization:** With the global population growing there is a sustained trend of migration from rural to urban areas. Cities (and surrounding areas) are increasingly becoming places where food is produced (i.e. urban and peri-urban agriculture). This plays an important role in how people procure food, what people eat, the nature of food traded and the interactions among food systems, people and the environment.
- **Regulatory landscape**
The regulatory landscape is changing with an increased importance on bilateral or multilateral treaties, emergence of private standards etc that can affect the food supply chain.
- **Public attention to food safety:** Increasing public awareness of food safety hazards, concern over hazards to health attributable to food hazards and reduced confidence in the ability of current food supply systems to manage food safety risks are additional factors to be considered in the food safety evolving context. At the same time food insecurity – an extreme manifestation of a large and growing wealth disparity within countries and among countries – remains a pressing global concern with important implications for decision-making on food safety at all levels.

Please note that the above are just some examples of drivers and the list is not complete. In responding to question #1 please consider these and any other broad drivers that you think could lead to emerging issues in food safety and quality.

1 - Identification of critical and emerging issues

Please identify what you believe to be the 3-5 most **critical issues** related to Food Safety and Quality, from **present to the next 2 - 5 years**.

- 1) *Salmonella spp.* (other serotypes than *Enteritidis* and *Typhimurium*) outbreaks
- 2) Spread of TBE virus through consuming raw milk/milk products
- 3) E-commerce
- 4) Food fraud

Please identify what you believe to be the 3-5 most important **emerging issues** related to Food Safety and Quality **in the next 2 to 5 years**.

- 1) Food fraud
- 2) New technologies
- 3)
- 4)
- 5)

2 - For each issue you have identified above please provide a short explanation¹ (1 or 2 paragraphs)

Critical issues**1) *Salmonella spp.* (other serotypes than *Enteritidis* and *Typhimurium*) outbreaks**

Salmonella spp. (other serotypes than *Enteritidis* and *Typhimurium*) outbreaks. In recent years, cross-border outbreaks of *S. Stanley* have occurred in the EU. The source of infection was traced back to a contamination in the turkey/poultry production chain. To prevent further evolution and spread of *S. Stanley*, countries must undertake actions in the poultry production chain. According to Regulation (EC) No 178/2002, food shall not be placed on the market if it is unsafe. Regulation (EC) No 2073/2005 specifies that *Salmonella* has to be absent in minced meat and meat preparations made from poultry meat. Regulation 1086/2011 set a food safety criterion for fresh poultry meat and covers only *S. Enteritidis* and *S. Typhimurium*. Food inspectors who perform official control found themselves in a difficult situation as the safety criteria for meat preparations differ from those for raw meat. The harmonisation of legislation and inclusion of *S. Stanley* in the targets for the reduction of the prevalence of zoonoses is needed.

2) Spread of the TBE virus through consuming raw milk/milk products

In Eastern Europe, the tick-borne encephalitis (TBE) cases have been increasing, climate change fluctuations being one of the factors. Recent studies showed that the greatest prevalence of the TBE virus was found in the milk of sheep, followed by the milk of goats

¹ In providing a **short explanation** of 1 -2 paragraphs please briefly explain: 1) why you selected that issue (i.e. on what basis - information/data, knowledge or assumption - you made that choice) and 2) the expected and/or actual impacts of the issue (whether the impact would be sector-specific, affect only some sub-populations or countries/regions, whether it would be related to public health or trade etc)

and cows. The goats infected by the TBE virus (TBEV) lacked the signs of clinical disease but the virus was shed into the milk. The results suggested a potential risk of infection with TBE by drinking raw milk and eating raw milk cheeses. There is a need for milk pasteurization before consumption. The increasingly fashionable natural lifestyle leads to the consumption of raw milk and products made of unpasteurized milk. Some cheesemakers believe that using raw milk more flavorful and more healthful cheeses are produced. To protect consumers and prevent the burden of TBE, effective vaccination programmes are needed (for animals and humans).

3) E-commerce

E-commerce – the increased numbers of online traders and consumers, increased trade across borders implies a high risk of buying illegal products, products with prohibited substances (especially when buying sports food, food supplements), prohibited food additives in food groups, without any information about ingredients, allergens. There are no international standards for marketing online, the different understanding of local consumers about food, the competent authority are used different control methods.

4) Food fraud

Food fraud (counterfeiting, adulteration, addition, dilution, substitution, mislabelling – that is done on purpose to receive financial gain). As the food supply chain becomes more complex and global, inspectors who perform the official control face challenges in fighting and preventing food fraud. To identify food authenticity, quality control laboratories now require increasingly sophisticated methods of analysis and new screening technologies. Poor detection (many techniques provide insufficient sensitivity and poor selectivity) did not allow to determine the authenticity and adulteration of food. Lack of reference laboratories, databases, standards or guidance creates difficulties in fighting against food fraud.

Emerging issues

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2) New technologies

With the fast development of the economy, new raw materials, new food, new ingredients, new technological processes are increasingly used in the food industry, the aim is the development of profitable business with minimum costs. It should be noted that not all the materials, compounds obtained in an intermediate manufacturing process, not all the compounds obtained in a technological process are regulated on the international level, e. g., trans fatty acid isomers in foods, acrylamide, perchlorates, nano technologies; not all of them have been subject to scientific assessment and assessment of the impact on human

health; consumers are not informed about new technologies or this information is very limited. Consequently, balanced, research-based risk communication to raise public awareness of new technologies and help the choice of food is required on the global level.