

Critical and Emerging issues in Food Safety and Quality

Republic of Armenia

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) Introduction of HACCP system in food industry
- 2) Identification of food additives and laboratory control
- 3) Control over use of GMOs
- 4) Bacteria, infections and viruses resistance against antibiotics
- 5) Evaluation of hygienic risks in the context of control of working conditions in food organizations

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) Control over zoonoses (Listeria, Salmonella, E. coli)
- 2) Low level of awareness and knowledge on food safety issues among young people
- 3) Identification of prion-contaminated food
- 4) Control over allergens in food
- 5) Economic factors and climate change

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

Critical issues

- 1) Introduction of a quality management system in the field of food safety is very important, which will allow food chain operators to manage risks and to enhance food safety.
- 2) Currently the list of permitted food additives and the quantities to be used is regulated by the legislation. The use of prohibited food additives, as well as the exceeding quantities of food additives can be harmful for human health and life. Given the fact that year after year, the diversity of food additives is growing along with the emergence of new technologies in food production, it is necessary to implement continuous control over the use of food additives.

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)

3) According to the scientific forecast, the Earth's population will become more than 9 billion by 2050 and the real opportunity to provide the growing population with food is to produce GMO containing food.

However, the GMO containing food has three main threats, such as threat to human (allergic reactions, metabolic disturbance, carcinogenic and mutagenic properties), global risks (activation of viruses, economic security), and threat to the environment (contamination of research areas, chemical contamination, drastic changes in soil microflora, serious threat to endemic biodiversity).

4) The overuse of antibiotics in animals and the accumulation of MRLs in animal origin food and their consecutive transmission to humans can cause the resistance to antibiotics, which is a serious threat from the health point of view.

5) Physical (heat radiation, non-ionizing radiation, industrial noise, ultrasound, infrasound, vibration, aerosols), chemical (chemical substances, bases, acids, antibiotics, vitamins, hormones, enzymes, protein preparations) and biological (bacteria contained in preparations, live cells and spores, pathogenic bacteria) factors, as well as heavy working process and low hygienic level at the workplaces have harmful effect on the human body and can lead to various pathological changes in human health, including occurrence of occupational diseases.

Emerging issues

1) There is a need in strengthening of control and surveillance structures for zoonoses, which will prevent the spread of zoonoses and enhance animal origin food safety.

2) As awareness and knowledge on food safety issues among young people are low, there is a proposal to include food safety training in educational programs in schools, which will allow increasing the level of basic knowledge on food safety issues, including food-borne diseases, food poisoning, use of healthy food, etc.

3) There is a lack of specific information on the presence of prions in animal origin food and feed.

4) There is a lack of specific information on allergens in food.

5) Food fraud at different levels of the economic activity can have negative impact on food safety.

As a result of climate change, the food imbalance will increase especially in the regions where people mostly depend on the efficiency of agriculture, as well as the characteristics of food-borne diseases will be changed especially taking into account the low level of sanitary and personal hygiene at all stages of food circulation.