



Final Declaration of the 8th International Food Safety Congress

The 8th International Food Safety Congress was held in Istanbul on 9 – 10 May 2024 with the slogan "Food Safety is Our Responsibility". During the two-day Congress, 51 speakers delivered their speeches in 2 main sessions, 3 interactive panels and 8 parallel sessions.

Under the coordination of the Turkish Food Safety Association, in cooperation with the International Association for Food Protection (IAFP); Organized with their presence and contributions of 36 institutions representing every stage of the food chain such as chamber of veterinarians and food engineers, sector and industry associations, consumer organizations, 8th International Food Safety Congress was held with the participation of more than 450 people, including guests from 12 different countries.

Food safety is under pressure all over the world due to the effects of climate change, inflation, economic and social inequalities, conflicts, and supply chain safety. Accordingly, food safety systems and risks are also changing. The dizzying developments in science and technology, the ease of access to information, which has positive effects as well as negative effects on food safety, shows that we have now reached another dimension in food safety. New approaches are needed to be ready for unexpected risks in food safety and to create a sustainable food safety system.

The final declaration of the Congress, which aims to evaluate food safety in every aspect in line with current developments and to create solution-oriented proposals, is as follows.

1. Zoonotic diseases transmitted by animal foods are one of the most important issues of food safety. Zoonotic disease agents can be bacteria, viruses and parasites basically. Bacterial food zoonoses may also be part of antibacterial resistance, which is important for human health. In this context, antimicrobial resistance is a food safety issue. Infections caused by bacteria resistant to antimicrobial drugs pose a significant global threat today. Antimicrobial resistance is a "One Health" issue that affects and is affected by humans, animals and the environment. Resistance is also called the "silent epidemic" because a child dies from sepsis every three minutes in the world due to infections resistant to antibiotics.

The unconscious use of antibiotics, which are used to protect and treat food animals from infectious diseases, also contributes to this global threat. Antibiotics can cause the development of resistance in bacteria that are found in animals (zoonotic) and are likely to cause disease in humans, these resistant bacteria can be transmitted to humans from animal products and the environment, and can cause zoonotic infections that are difficult to treat in humans.

The extent of the resistance caused by the use of antibiotics in animals in Turkey has not yet been fully revealed. Similar to the European Union countries, the relationship between the amount of antibiotics used in animals and resistance in zoonotic bacteria should be discussed in all aspects in Turkey and the information obtained should be shared with the public every year.

The "European Union One Health 2022 Zoonosis Report" is a very valuable guide for Turkey in terms of content and transparent sharing. Almost the only source related to zoonoses in Turkey is the Turkish Zoonotic Diseases



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Action Plan, which was prepared by the Ministry of Health with the contribution of the Ministry of Agriculture and includes data only until 2019. In this context, the justified expectation of all stakeholders dealing with academia and food is the share of zoonosis data after 2019 in a transparent manner similar to EFSA.

It is a vital necessity for the Ministry of Agriculture and Forestry to develop and maintain cooperation and data sharing with the Ministry of Health and other relevant ministries as required by the concept of "One Health" on the one hand, and the coordination of relevant units such as veterinary health products and food on the other.

In the fight against the problem of antimicrobial resistance, both intersectoral and international cooperation, target setting, data sharing and finally the creation of a common mind are of great importance.

2. Chemicals migrated to food from food contact materials, chemicals transmitted from the environment, pesticide residues (pesticides) and process contaminants are another burning food safety problem. Residues and contaminants pose a major threat to humans, animals and the environment unless they can be managed on a science-based foundation.

- Plastic pollution is becoming almost as big an environmental problem as global climate change. Studies have shown that micro and nanoplastics are found in drinking water, animals, aquaculture and inevitably in the human body. It is obvious that there is a need for a holistic perspective, including alternative packaging approaches, on the use and regulation of plastics in a way that sustainability and food safety complement each other. In this context, unnecessary plastic use should be prevented, especially the use of single-use plastics should be controlled.
- The search for safe packaging management as an alternative to plastics should continue worldwide, in this context, unnecessary plastic use should be prevented, especially by restricting the use of single-use plastics, plastics should be collected separately at the source, the framework and details of the reuse and recycling of plastics should be determined by controlling food safety risks, and most importantly, plastics must be managed with a global environmental-human health holistic strategy.
- Pesticide residues are another common food safety problem. As a result of their illegal and uncontrolled use, the pollution that occurs in the soil and water becomes permanent for a long time due to the half-life of the active substances and causes the size of the problem to increase. Pesticide residues reach our table with plant and animal foods. In Turkey, foods containing transboundary pesticide residues constitute the most common food safety problem. As detailed in the relevant section of our declaration, it is extremely important to carry out inspections effectively, to develop laboratory capacities, to share results transparently and to spread good agricultural practice examples.
- Mycotoxins, which are produced by molds and have toxic effects on humans and animals, are an important food safety problem that has been common in the world and in Turkey for many years. Depending on the type of toxin and the dose of contact, there are chronic effects (carcinogenic, teratogenic, tremorgen, hepatotoxic, nephrotoxic and neurotoxic) as well as acute effects. In studies on the possible effects of climate change on food safety, it is predicted that the mycotoxin problem will continue to increase.

The most common problem in Turkey regarding mycotoxins is in dried fruits and nuts including those found in cereal products, dairy products and dried fruits such as oilseeds/nuts, chili peppers, dried figs. Turkey is the number one producer of dried figs and raisins in the world, and the 3rd largest producer of

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hazelnuts and pistachios. However, limit exceeding mycotoxin problems, especially Aflatoxin and Ochratoxin-A, are frequently encountered in these products. This situation creates an important food safety problem in domestic and foreign markets. Intensive notifications are received about our exports to the European Union, but there is no information shared about the frequency of occurrence in Turkey.

In order to combat mycotoxin risk, the adoption of a multifaceted and integrated approach at all production stages (pre-harvest and post-harvest), especially systematic and transparent information sharing, the development of modern technologies in the drying of products and the use of different reduction techniques are considered as the most effective methods.

- PFAS (Per and polyfluorinated alkyl compounds), MOH (Mineral Oil Hydrocarbons), PAH (Poly aromatic hydrocarbons), HAC (Heterocyclic aromatic hydrocarbons), HCA (Heterocyclic amines), Acrylamide, Furans, 3-MCPD (3-monochloro propane diol), NIAS (not intentionally added substances), which have not yet been included in the legislation, but which have been studied intensively especially in the EU and whose serious harms to health are the subject of discussion, are consumed in Turkey. It is a great need for the development of the food sector, especially consumer health, to be prepared in advance for these risks by making risk assessments in foods and establishing sectoral good practices.

3. The positive effects of probiotics on human health have been known for a long time. The positive effects of probiotics, especially in strengthening the immune system and protecting gastrointestinal health, have been clinically demonstrated. Besides, academic studies have also shown that many health effects attributed to probiotic microorganisms do not have sufficient clinical evidence.

After examining in detail the issues such as the identification and characterization of the microorganisms in probiotics in terms of both efficacy and food safety, and whether there is a transferable antibiotic resistance gene, it should be offered for sale by specifying it with the strain number. Along with probiotics, prebiotics and postbiotics are entering our lives more and more every day. There is an urgent need for internationally harmonized legislation in this regard.

4. Food, which is an indispensable necessity for people to survive, is also an object of culture. In addition to the contribution of traditional foods to nutritional needs, it is also known that they are indispensable values in the cultural structures of countries.

Turkey has a rich variety of traditional foods and high potential in every market. However, in order for these products to develop in the national market and to strengthen their competitiveness, especially in foreign trade, product standardization must be ensured and food safety principles must be guaranteed. It is necessary to determine the food safety risks of our traditional foods on a scientific basis and to be decisive in establishing international standards on the basis of the product and production process of these products which originate from Turkey.

5. Today, consumers' expectations for food are not only limited to nutrition, but it is also hoped that it will meet many expectations such as staying younger and longevity. Fraud is also an important problem area in relation to food, which has such a fundamental place in our lives. Food fraud, in which consumers are deliberately deceived for the sake of illegal economic gain, is a common non-compliance all over the world including Turkey. Dairy products, honey, olive oil, alcoholic beverages are the products where the problem is most common.



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The provisions of the legislation on this subject will protect the interests of the consumer and the producer who produces properly, if the provisions of the legislation on this subject define the parameters, limit values and analysis methods that are sensitive enough to distinguish between the right and the unfair, the intentional action and the contamination, and the applications are made accordingly. In the prevention of fraud in food, it is of great importance to establish a corporate ethical culture in food businesses as well as to ensure effective and deterrent controls. It is a basic requirement for institutions to hold on to ethical values and to develop an ethical climate.

6. The analysis methods used to determine whether foods are safe or fraud are based on science and in the most effective way possible. From sampling and preparation of samples to the analysis methods used, it is important to ensure a wider harmonization in the world. A system in which deviations and misinterpretations are minimized should be targeted.
7. When the causes of food safety and fraud problems are examined, it is seen that human and behavioral factors are the main determinants. With this perspective, classical methods in food safety management should be changed; Behavior-based food safety management should be preferred, and it should be aimed to provide a food safety culture. Determining ethical principles at the individual and institutional level, creating rules based on these principles, and creating an ethical climate are indispensable priorities in food safety and the fight against fraud.
8. In today's societies, as the distance between the field and the table increases, as individuals move away from the dynamics of agricultural production and the food produced in factories becomes more usual, alienation and insecurity increase. Consumers have significant concerns about food in the world and in Turkey. This anxiety and their search for confidence also makes it easier for them to believe in unrealistic discourses. There is an intense information pollution about food. Consumers are moving away from real risks; they believe in the discourses of professionals who are not experts in the subject and even people who are only called "influencers" but do not have any education about food. It should not be ignored that the ineffectiveness of risk communication plays an important role in the spread of information pollution.
9. In order to prevent information pollution and create consumer trust;
 - It is a fact that if communication on food safety risks is not made by the public or sector representatives, who are seen as "biased parties", but by an independent scientific authority that can be a trust center, this will increase the success of communication. When it is ensured that the right information is easily accessed from reliable sources, consumer confidence will also increase.
 - The risk assessment should also be carried out by an independent scientific authority, and the information of the scientists in the said board, their information on whether they have a conflict of interest, and their scientific opinion reports issued should be easily accessible and can be examined.
 - Scientists must also take an active role in informing about the risks in foods. This is a scientific responsibility.
 - Food safety problems, as well as fraud problems detected during official controls, should be shared with the public periodically within the framework of certain procedures. The current legislation published in 2017 on official controls in the European Union System, which we are trying to harmonize, takes



transparency and openness to a much higher level.

- A simple and clear language should be used in communication.
- 10.** It is seen that the causes of food safety problems are spread over a very wide perspective. In order to manage these risks, the public authority that establishes legislation, carries out official controls and imposes sanctions within the framework of the established legislation has a great responsibility.
- Under no circumstances should the fact that food safety legislation is science-oriented and prepared within the framework of international cooperation and that improvements are made in the legislation as necessary under the constant supervision of science.
 - It is important that every stage is highly transparent and participatory in order for legislative regulations and related audits to build trust in the society.
 - It is extremely important and vital for small businesses that do not comply with the requirements of the legislation to be approached as educational and supportive in order to comply with the legislation. However, this supportive approach should not mean tolerating foods that do not comply with food legislation.
- 11.** Food safety necessitates a holistic and preventive approach. Therefore, the facilities where food is produced and the equipment used should be designed to minimize food safety risks. The certification of plants and equipment is evolving into an increasingly decisive position in the global food trade. The Global Food Safety Initiative (GFSI) has partnered with the European Hygienic Engineering and Design Group (EHEDG) to standardize the choice of approved plant designs and equipment for the production of every single food in the world food trade system. Therefore, both companies producing food equipment and food producing enterprises/factories will have to comply not only with their products, but also with their production processes and physical structures in accordance with global standardization and certification requirements.
- 12.** Food businesses, which are responsible for ensuring food safety according to local laws, carry these responsibilities, benefit from internationally accepted food safety management system standards and have the compliance of their systems with food safety audited by independent accredited audit institutions. In a presentation made at the congress, the most common nonconformities encountered in BRCGS audits were evaluated. Problems in basic hygiene measures, facility design, pest control management, control of chemicals, product labelling, traceability and product contamination controls draw attention.
- 13.** All nonconformities are extremely important in terms of food safety. However, it is clear that the effective establishment and operation of the traceability system is of critical importance in terms of reaching the source of a food safety problem that may arise and taking precautions in a short time. If traceability is effectively ensured, it will be possible to reach the origin of a problem detected in the final product in primary production. Elimination of common nonconformities detected in food establishments will make very concrete contributions to efforts to ensure food safety.