Food safety in the face of climate change

The potential impact of climate change on food safety is considered in a new report by The Food and Agriculture Organization of the United Nations (FAO). The report aims to raise awareness of the issue and to facilitate international cooperation in better understanding, developing and implementing strategies to address the changing food safety situation.

Predicted climatic changes include an increase in the average global temperature, stronger storm systems, increased frequency of heavy precipitation events, extended dry periods etc. The report takes a broad look at the potential impact (direct and indirect) of these changes on a number of food safety issues including agents of food-borne disease (with specific consideration given to zoonotic diseases), mycotoxins, biotoxins and environmental contaminants. As there is much uncertainty about the effect of climate change on food safety, the report discusses both expected and speculative effects.

Governments need to be prepared for emerging food safety risks and a number of areas are highlighted that deserve special attention to ensure that risks emerging from climatic change are recognised as early as possible and that countries are prepared to respond promptly to these. Recommendations include:

- An interdisciplinary approach is required to address the challenges affecting food safety.
- Industry guides to ‘good practice’ may need to be reviewed/updated as new information becomes available regarding the impact of climate change on food safety hazards. Governments and industry associations have a role to play in this regard.
- Governments must keep consumers well informed of the hazards associated with foods and the relevant control measures.
- Relevant innovations are expected to play a role in improving our understanding of the food safety challenges posed by climate change and countries should develop capacities and mechanisms to assess and manage any potential risks associated with the application of these new technologies.

National authorities must foster applied research and encourage links between government services, universities, and private sector associations. Training and education is essential to build food safety, risk assessment and surveillance capacity. Climate change also highlights the need for many countries to intensify their efforts to implement food safety management programmes in line with FAO/WHO guidance.

Governments should take a global approach to epidemiological surveillance, involving collaboration between professionals involved in human, animal and environmental health. The rapid investigation of unusual outbreaks is particularly important. Enhanced early warning systems are essential. This requires good collaboration and communication between sectors at national and international level. Countries should review and develop food safety emergency plans.

Integrated monitoring and surveillance of food and the environment for hazards is critical for the identification of emerging problems and changing trends. Such programmes may need to be reviewed and amended to address emerging hazards. The data generated from these programmes contribute significantly to predictive modelling and risk assessment and should be shared at national and international level.


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