

## **FOOD SAFETY AT THE NATIONAL LEVEL - THE ROLE OF GOVERNMENTS**

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### **Summary**

It is the role of governments to protect their subjects' health and interests as consumers of publicly marketed food. This duty can be met by implementing an effective and transparent food control system which considers all aspects of the food chain, farm-to-fork, including: feed production, primary production, food-processing, storage, transport, and retail sale. Governments have key role in setting policy and providing legislation that lays down minimum food safety or marketing standards that food businesses must meet. Governments must then ensure that food businesses comply with these requirements – through training, inspection and enforcement. By implementing national food surveillance and monitoring programs, governments can verify if the controls in place are sufficient to maintain a safe food supply. Finally, to ensure that consumers' health and interests are truly protected, governments must ensure that consumers are provided with timely, factual and balanced information on food safety issues.

### **1. Introduction**

Food safety is about the minimization of risk. To protect public health, prevent fraud,

avoid food adulteration, and facilitate trade in safe food an effective national food control system is essential. It is also critical in enabling countries to assure the safety and quality of their foods entering international trade and to ensure that imported foods conform to national requirements.

In the past the emphasis of food control systems was placed on the stimulation of trade and commerce. More recently that balance has moved, placing consumers' health and interests first and trade second. Nevertheless the new global environment for food trade places considerable obligations on both importing and exporting countries to strengthen their food control systems and to implement and enforce risk-based food control strategies. Establishing and fostering a national food control system is the role of government.

## **2. Threats to Food Safety**

Generally, threats to food safety arise from microbiological or chemical contamination of food; in particular foods of animal origin such as meat, milk and eggs. Poor hygiene in production or catering sectors is often to blame for breakdowns in food safety. Factors such as undercooking, cross-contamination from raw to cooked food, poor refrigeration and poor personal hygiene are often cited as the contributory causes. However, the microbiological and other threats to food safety are changing.

We have witnessed the emergence of virulent pathogens such as *E. coli* O157:H7 and *Listeria*. Aflatoxins in cereals and nuts are now a constant problem. The discovery of illegal dyes such as Sudan Red I in chili powder from India in 2005 resulted in the recall of over 550 food products in the UK and sixty in Ireland. More recently the Food and Drug Administration (FDA) in the USA has investigated outbreaks of food borne illness linked to contamination at the primary production stage of farm produce, such as lettuce and spinach. The European Food Safety Authority (EFSA) noted that one of the emerging public health concerns was the discovery of the migration of the substances ITX (2-isopropyl thioxantone) and EHDAB (2-ethylhexyl-dimethylaminobenzoate) from printing inks to food packaging.

The continuing and changing nature of the threats to food safety has had an impact, resulting in a sequence of food scares over the past few decades. This was clearly illustrated in Europe where confidence in the food supply, the food industry and the food regulatory system was seriously undermined by two food scares: those linked to bovine spongiform encephalopathy (BSE), and the contamination of food with dioxin. The common factor in both these events was that they arose from breakdowns in the animal feed sector.

It is increasingly recognized that if we are truly to manage food safety, the entire food chain must be controlled from farm-to-fork. Indeed the Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO) Global Forum for Food Safety Regulators (2002) agreed that there is a global recognition that actions must be taken throughout the food production chain from the farm and fishing boat to the consumer. This theme has influenced many countries which are adopting an integrated approach to food safety – recognizing the need to deal with food and feed

hygiene, official controls, animal welfare, and animal and plant health. Governments need to drive that integrated approach.

### **3. Food Safety – A Shared Responsibility**

Responsibility for food safety is shared among all stakeholders, from producers and distributors to caterers and consumers. Ensuring that consumers' health and consumers' interests are protected requires the input of many organizations and individuals, both within regulatory agencies and the food industry.

### **4. A Role for Government**

National governments have a specific role to play in ensuring that consumers' health and consumers' interests are paramount. At national level food safety control has traditionally been the responsibility of a number of central government organizations, such as the ministries or departments of agriculture, health, trade or commerce. At local level such responsibilities are delegated to local authorities, municipalities or local governments. Mechanisms for collaboration and cooperation between the various national government organizations have often been weak or absent. Effective food safety control at national level can be undermined by the existence of fragmented legislation, multiple jurisdictions, inconsistencies in enforcement, and weaknesses in food surveillance and monitoring.

Experience gained over the past two decades shows the value of an integrated approach from farm-to-fork covering all sectors of the food chain including: feed production, primary production, food-processing, storage, transport and retail sale.

In order to assist countries in developing and strengthening national food safety control programs, guidelines have been produced by the FAO and the WHO. These provide advice to national authorities on strategies to strengthen food control systems to protect public health, prevent fraud and deception, avoid food adulteration and facilitate trade.

This chapter attempts to describe the responsibilities and tasks of national governments in ensuring that food safety controls are in place at national level to ensure the health and interests of consumers are protected.

### **5. Integrated Controls from Farm-to-Fork**

The food chain has become more complex in recent years, with increasing liberalization of trade and expanding global distribution of food and feed. Meeting the requirements of trade agreements, such as the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT), is essential for countries wishing to have access to international food markets. Countries are now obliged to demonstrate that food safety measures provide appropriate public health protection and are not unnecessarily restrictive to trade.

The ability to demonstrate adequate national food controls are in place at all stages of

production, processing and marketing is also necessary to remain competitive in the international market. There are many links in the food chain, which is only as strong as its weakest link. Integrated controls are required at all stages of production and in all sectors in line with the farm-to-fork principle. The introduction of the farm-to-fork principle to food safety control allows the creation of a comprehensive system covering all food in all sectors, replacing the outdated sector-specific, patchwork system of rules.

Experience both at national and international level has shown that, in order to ensure consumer protection, it is necessary to consider all aspects of the food production chain as a continuum, from and including primary production up to and including sale or supply of food to the consumer, because each element may have a potential impact on food safety. Governments have a pivotal role in ensuring that all of the resources it has provided for food control act in an integrated manner to make sure that the entire food chain is supervised.

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### **Biographical Sketches**

**Prof. Alan Reilly** BSc, MTech, CBiol, FIBiol, FIFSTI is Chief Executive of the Food Safety Authority of Ireland (FSAI) and Adjunct Associate Professor at the School of Agriculture, Food Science and Veterinary Medicine, University College Dublin. The FSAI is the national agency that has responsibility for the enforcement of food regulations in Ireland. As Chief Executive he is charged with providing the direction and leadership of this science-based agency which is dedicated to protecting consumers' health and consumer interests in the area of food safety.

A graduate of University College, Dublin and of Brunel University, Uxbridge, UK, he has worked for over 35 years in the area of food safety. Before joining the FSAI in 1999 he worked in the Food Safety Program of the World Health Organization in Geneva. He has spent a number of years working in the UK scientific civil service and managed the Food Safety Group at the Natural Resources Institute of the University of Greenwich in Kent. He has worked as a visiting Associate Professor at the College of Fisheries, University of the Philippines where his main areas of research were on post-harvest quality and safety of fish and fishery products.

He is a member of the Advisory Forum of the European Food Safety Authority, a Board Member of the Irish National Accreditation Board, and a member of the Scientific Advisory Board of the European Food Information Council. He also acts as a food safety advisor to the World Health Organization and the Food and Agriculture Organization of the United Nations. He is a member of the Advisory Board of the WHO International Food Safety Authorities Network (INFOSAN).

**Raymond Ellard** qualified as an environmental health officer (EHO) in Ireland in 1975. He holds a Master's Degree in Food Science, a Master's Degree in Health Services Management and a third Master's Degree in European Food Regulatory Affairs.

Having worked as an EHO at local level in various posts until 1990, he then spent eight years at national level as Chief Environmental Health Officer with the Department of Health and Children. In 1998 he moved to the Food Safety Authority of Ireland (FSAI) as Chief Specialist in Environmental Health, before taking up his present post there as a Director. Currently, he has responsibility for the FSAI's Audit and Compliance Division.

**Dr. Judith O'Connor** graduated from the University of Glasgow, in 1998, with a degree in Microbiology. In 2002, she received a PhD in food microbiology from Queen's University, Belfast.

She worked for one year as a Postdoctoral Research Associate at Texas A&M University, looking at the validation and verification of carcass decontamination procedures for *E. coli* O157. She returned to Ireland in 2003 to work as a Technical Executive with the Food Safety Authority of Ireland in Dublin.