

5. EUROPEAN REGION



Over the past 10 years, food policy in the European Region has been reshaped in response to a series of problems, beginning with the bovine spongiform encephalopathy (BSE) crisis in Britain, and followed quickly by dioxin contamination of animal feed, resulting in the contamination of numerous meat products in northern Europe. Within the European Union (EU), comprising 25 European nations, these problems led to an integrated approach to food safety and to a set of food safety regulations designed to harmonize existing national requirements. Because food safety laws in the EU were developed recently, they are often innovative in their approach.

5.1 Foodborne diseases in the European Region

Although it is difficult to estimate the total burden of foodborne illnesses, WHO finds that foodborne diseases are on the rise in the European Region:^{1,2}

The European Region contains the following countries:

Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium*, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus*, Czech Republic*, Denmark*, Estonia*, Finland*, France*, Georgia, Germany* Greece*, Hungary*, Iceland, Ireland*, Italy*, Kazakhstan, Kyrgyzstan, Latvia*, Lithuania*, Luxembourg*, Malta*, Monaco, Netherlands*, Norway, Poland*, Portugal*, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia and Montenegro, Slovakia*, Slovenia*, Spain*, Sweden*, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, United Kingdom of Great Britain and Northern Ireland*, and Uzbekistan.*

Note: European Union members are designated with an “”.*

- i) Since 1985, illnesses from *Campylobacter jejuni* have increased steadily. In several countries, this observed rise could be attributed to an improvement in diagnosis rather than increasing incidence. Most reported cases of campylobacteriosis occur sporadically, as single cases, or small family outbreaks.
- ii) Although the incidence of salmonellosis is decreasing in several countries, WHO data

show that *Salmonella* is still the most frequently reported cause of foodborne outbreaks.³ It is responsible for about 75 percent of the

outbreaks, of which one-third are caused by *Salmonella* Enteritidis, a hazard frequently linked to contaminated eggs.⁴

- iii) The parasitic disease trichinellosis is increasingly reported in the Balkan region⁵ among the non-Muslim population, owing in part to the consumption of pork products processed at home without adherence to mandatory veterinary controls.
- iv) Since the mid-1990s, reports of serious zoonoses such as brucellosis (Malta fever) have been on the rise in the central Asian republics, particularly Kyrgyzstan and Tajikistan. Brucellosis in those countries is transmitted mainly through the consumption of unpasteurized goat and sheep milk. The increase is attributed to the socioeconomic and political changes that have led to the deterioration of control programs for livestock, coupled with limited awareness of the disease.
- v) Botulism occurs frequently in Eastern Europe, due in large part to traditional ways of preserving foods at home. The highest incidence of botulism is reported in the Caucasus (Armenia, Azerbaijan, and Georgia). Traditional methods of canning are widespread in those countries, primarily because of the high cost of fresh vegetables and the limited availability of canned food.
- vi) Harmful levels of pesticides and other chemicals are found in some foods, such as fish. Long-term ingestion of those chemicals can cause cancer and damage to the respiratory, nervous, reproductive, immune, and endocrine systems. In Central and Eastern Europe, food contamination arises largely from industrial contamination from mining and smelting activities, the energy sector, the agricultural industry, or dispersal of hazardous and municipal waste. Such effects are readily observable, for example, in the Aral and Caspian Sea regions.
- vii) Accidental or intentional adulteration of food by toxic substances has resulted in serious public health incidents. For example, in Spain in 1981-1982, rapeseed oil denaturated with aniline killed more than 2,000 people and disabled another 20,000, many permanently. In that case, the party responsible for the contamination was never identified despite intensive investigations.
- viii) Few countries report cases of *Listeria monocytogenes*, and higher incidences are reported by countries – like France – with mandatory reporting. Also, few countries provide information on numbers of

Escherichia coli O157:H7 infections or hemolytic-uremic syndrome (HUS) cases. Considering the large differences in the reporting systems among countries, it is still difficult to perform an analysis of trends for Listeriosis or for *Escherichia coli* infections and HUS cases.

5.2 Food safety concerns in the European Region

5.2.1 BSE

In 1986, the first cases of bovine spongiform encephalopathy (BSE), or “mad cow disease,” were reported in cattle in the United Kingdom. Between November 1986 and November 2002, about 180,000 cases of BSE were confirmed in the United Kingdom.



In March 1996, a new human disease called variant Creutzfeldt-Jakob Disease (vCJD) was first described. It is strongly linked to exposure to the BSE agent from infected cattle that have entered the human food supply. So far, approximately 150 human deaths have been linked to vCJD in the United Kingdom,⁶ and several other deaths have occurred in other European countries, including France and the Netherlands.⁷

In response to BSE, the European Commission (EC) has introduced a comprehensive set of European Union-wide measures,⁸ covering:

- controls on animal feed including a ban on the feeding of mammalian meat and bone meal (MBM) to cattle, sheep and goats,⁹ and a total EU-wide suspension of the use of processed animal protein in feeds for any animals raised for food production
- mandatory veterinary inspection of all cattle presented for slaughter
- stringent processing standards for the treatment of ruminant animal waste
- surveillance measures for the detection, control, and eradication of BSE involving active monitoring by veterinarians and passive monitoring through tests
- the culling of animals with a high probability of having received potentially infected feed
- required removal of specified risk materials (SRMs), such as the spinal cord, brain, eyes, tonsils, and parts of the intestines from cattle, sheep, and goats before introduction to human and animal food chains
- targeted testing for BSE, with a focus on high risk animal categories¹⁰

The surveillance system requires compulsory examination of all animals showing signs suggestive of BSE. In addition, rapid post-mortem testing for BSE is required on:

- all bovine animals over 24 months of age slaughtered as emergencies or showing signs of any kind of illness at the ante-mortem inspection in the slaughterhouse
- all bovine animals over 30 months of age subject to normal slaughter for human consumption¹¹
- all bovine fallen stock over 24 months of age, that have died or been killed on the farm or in transport, but not slaughtered for human consumption¹²

Since the discovery of the first known case of BSE in a goat in January 2005, a testing scheme has been adopted to determine whether that case represents an isolated incident or whether further measures are needed.¹³

5.2.2 Genetically engineered (GE) foods

Genetically engineered foods have been highly controversial in the European Region. Consumer organizations have expressed concerns based on a variety of food safety, environmental, and economic issues, including:

- i) the capability of GE plants and animals to introduce engineered genes into wild populations
- ii) the impact of pesticidal traits on insects that are not pests
- iii) the reduction in the spectrum of other plants and the loss of biodiversity
- iv) the potential for allergic reactions and other adverse effects on human health
- v) the intellectual property rights of the industry and the rights of farmers to own their crops
- vi) the chain of accountability in case of disaster
- vii) the labeling and traceability of GE organisms

The public concerns about GE food in general have led to an almost total rejection of GE products in the EU. They have also resulted in a five-year de

facto moratorium on approval of GE products, which ended in May 2004. In addition, they have led to extensive legislation¹⁴ that:

- implements detailed mandatory approval procedures for the deliberate release of a GE organism into the environment and/or for use of a GE organism in food or feed
- requires business operators to transmit information about products that contain or are produced from GE organisms
- gives consumers comprehensive information and requires labeling of all food and feed containing a GE organism¹⁵

5.2.3 Antibiotic resistance

In recent years, as the use of antibiotics in food production has grown, microbes found on many food animals have become increasingly resistant to antibiotic drugs. Such common strains as *Salmonella* and *Campylobacter* with resistance characteristics can spread from animals through food and cause infections in humans.¹⁶ Human illnesses can become much harder to treat, as some common antibiotics are rendered useless.

In the EU during the late nineties, approximately one-third of all antibiotics produced were used on food-producing animals and poultry.¹⁷ Large quantities were used on healthy animals, either as a prophylaxis or for growth promotion. This practice exposed a large number of animals to sub-therapeutic concentrations of antibiotics, irrespective of the animals' actual health status.

With growing evidence of bacterial resistance to antibiotics, the EU adopted legislation banning the use of some antibiotics as animal feed additives and growth promoters. In December 1998, four products (virginiamycin, spiramycin, tylosin phosphate, and bacitracin-zinc) were banned. More recently, a new EC regulation was adopted that phases out approval of four antibiotic feed additives that are still on the EU market as of January 2006.¹⁸

5.2.4 Irradiation

The European Commission heavily regulates irradiated foods and food ingredients.¹⁹ The general and technical aspects of the treatment process, labeling of irradiated foods, and conditions for authorizing food irradiation are all prescribed in a European Union-wide directive.²⁰

Although a small number of foods have already been approved for irradiation, in 2002, the European Parliament rejected a proposed extension of the list of irradiated foods in the EU. That extension was strongly opposed by several European consumer organizations.

5.2.5 Growth hormones in meat

Since 1988, the EU has prohibited the use of hormones for growth promotion in farm animals.²¹ That prohibition applies to both Member States and importers alike.²² It has drastically reduced the circumstances under which growth-promoting hormones may be administered for other purposes to food-producing animals.²³

5.2.6 Contaminants in food

The contamination of food by environmental chemical hazards is a major public health concern in the European Region. Dioxins and polychlorinated biphenyls (PCBs) are toxic chemicals that belong to a group known as persistent organic pollutants (POPs).

Once in the environment, those chemicals tend to bio-accumulate in the food chain. In 2001, contaminated animal feed led to a major food scare, as elevated levels of dioxins and PCBs were found in many meat products in Belgium and other parts of Europe.

Other chemicals, such as mercury, tend to bio-accumulate in large ocean-dwelling fish. That has caused several European countries to recommend that vulnerable groups, including pregnant women, limit their intake of certain fish known to contain high levels of mercury.

Nuclear contaminants, known as radionuclides, also pose an important environmental problem in the European Region, although their emission is largely the result of a major industrial accident. In 1986, the Chernobyl nuclear power plant accident raised great concerns about the health risks. The impact was greatest for people living in the vicinity of the accident and in areas of the European Region where nuclear fallout was deposited. In others,

Pilot project on rapid environment and health risk assessment (REHRA)

In January 2000, a cyanide spill in the Danube River highlighted the need for better systems for regional authorities to manage health and environmental risks from industrial sources.

The REHRA project, a joint effort of WHO/Europe and the Italian Ministry for the Environment, developed a system that enabled national authorities and regional bodies to quickly rank environmental and health risks from a wide variety of active and inactive industrial sources, and to plan appropriate measures. The particular value of that project lies in its consideration of risks to human health as well as the environment.

concerns focused on contaminated foods from those areas as the main source of exposure. Food contaminated by radionuclides with extended half-lives, such as cesium 137, continues to be a source of exposure for people living in Ukraine.

5.3 Food safety oversight in the European Region

5.3.1 Inside the EU

The member states of the EU have developed an integrated approach to food safety intended to assure a high level of protection for human life and health. The EU uses farm-to-table measures and monitoring to implement improvements in food safety, animal health and welfare, and plant health. The EU has also given consumers a legal right to safe food and to accurate and honest information, and strives to harmonize existing national requirements to ensure the free movement of food and feed throughout the EU.

In 2002, the European Parliament and the Council adopted a regulation establishing the general principles and requirements of Food Law.²⁴ The aim is to provide a coherent approach in the development of food legislation and to establish common definitions, principles, and obligations covering all stages of food and feed production and distribution. The Food Law articulates the need for proper scientific advice with emphasis on the fundamental principles of excellence, transparency, and independence. To facilitate the implementation by farmers, businesses, and national authorities of the major requirements of the Food Law, a guidance document has been issued.²⁵

The inclusion of feed in the scope of that legislation was particularly important because feed contamination has been at the root of many major food scares of the past decade. It makes food safety the clear responsibility of food and feed businesses.

The Food Law is supplemented by: (i) targeted legislation on such food safety issues as pesticide use, food supplements, colorings, and antibiotics and hormones in food production; (ii) rules on hygiene; and (iii) stringent procedures on release, marketing, labeling and traceability of crops and foodstuffs containing genetically engineered (GE) organisms.

Within the EU, the EC enforces the Food Law in three ways, by:

- verifying that EU legislation has been properly incorporated into member state law

- auditing reports from member states and other countries on compliance with the rules
- carrying out on-site inspections in the EU and in other countries that trade with the EU

5.3.2 Strengthening food safety systems in Eastern and Central Europe

In expanding its membership, the EU declared that it would not compromise food safety by admitting countries with lower food safety standards or with programs that pose additional risks for consumers. Therefore, most European countries that seek EU membership must harmonize their food safety regulations with the requirements of the EU.

Joining the EU requires countries in Central and Eastern Europe to take a number of steps to improve their food safety systems, including:

- adopting a new food law and improving coordination among the different national competent authorities and institutions responsible for food controls
- harmonizing all health legislation in accordance with EU regulations
- updating approaches and methods to improve food safety and moving from mandatory compliance with so-called “Ghost Standards” from the former Soviet Union toward risk-based control systems²⁶
- improving access to laboratories and the quality of laboratory equipment
- increasing laboratory-based surveillance of foodborne diseases and epidemiologic investigation of outbreaks, as well as chemical and microbiological food contamination monitoring

Educating workers from the farms to the laboratories of the importance of food safety is another important element. Initially, only managers in Central and Eastern European countries received extra training and many workers questioned the necessity of the extra tasks. Training of staff to operate the new and sophisticated equipment is an additional problem, especially as the newer systems are often computerized.²⁷

Training in modern food safety systems is often not available at many universities of post-communist countries, leaving a shortage of specialists who are able to work as quality managers. Moreover, many well-educated young

specialists are leaving for work in Western countries, making it more difficult to find qualified specialists.²⁸

The lack of financial resources allocated by national governments and the costs of the process are other obstacles to the modernizing of food safety systems in Central and Eastern European countries. The financial help provided by the EU,²⁹ FAO, and WHO³⁰ has therefore been essential to building food safety action plans in those countries.

5.3.3 Food Safety Agencies in Europe



In 2002, the European Food Safety Authority (EFSA)³¹ was created. It has since expanded its scientific and communications activities and is currently developing its institutional, stakeholder, and international relations. It aims to provide the EC with independent scientific advice on all matters with a direct or indirect effect on food safety. It is a separate legal entity, independent of the EC, and other EU institutions.

EFSA's portfolio covers all stages of food production and supply, from primary production to the safety of animal feed to the delivery of food to consumers. It collects information and analyzes new scientific developments in order to identify and assess potential risks to the food chain. It carries out scientific assessments on matters that may have a direct or indirect effect on the safety of the food supply, including those relating to animal health and welfare, and plant health.

EFSA also gives scientific advice on non-food and feed GE organisms, as well as on nutrition, in relation to EU legislation. It can communicate directly with the public on any issue within its purview.

There has been a debate regarding the powers vested in EFSA. Some consumer organizations have criticized EFSA as toothless because the agency lacks the powers to regulate food production and handling or to enforce EU legislation regarding food safety. Others have argued that this separation between risk assessment and risk management ensures that the agency operates as an unbiased scientific advising body, free of political influence.

Along with the creation of EFSA, many European countries have established unified food safety agencies.³² The creation of these unified agencies has improved communication between all levels of government from local to international. It has also improved the scientific and technical level of food control.³³

5.4. Policies and plans of action in the European Region

5.4.1 Risk Assessment and Risk Management

EU regulations state that risk assessments shall be based on available scientific evidence and undertaken in an independent, objective, and transparent manner.³⁴ They also formally establish the precautionary principle as an option open to risk managers when decisions have to be made to protect public health but scientific information concerning the risk is inconclusive or incomplete.³⁵

The precautionary principle is relevant in circumstances where risk managers have found reasonable grounds for concern that an unacceptable level of risk to health exists but the supporting evidence is insufficient for a comprehensive and accurate risk assessment.

When scientific evidence is scarce, risk managers may use the precautionary principle and take appropriate action to protect the public until more information on the nature of the risk becomes available. Such measures are provisional and have to comply with the normal principles of non-discrimination and proportionality.

5.4.2 Responsibility for food safety

The primary responsibility for ensuring both food safety and compliance with food law in the EU rests with food and feed businesses. For example, a food and feed business operator is required by law to inform authorities immediately if there is reason to believe that food it has placed on the market may be injurious to human health. Operators must inform authorities of actions taken to prevent risks to consumers and shall not prevent or discourage any person from cooperating with the relevant authorities.³⁶ Following the recent contamination of spices, like chili powder and curry, with Sudan dyes (industrial dyes normally used for coloring plastics and other synthetic materials) that have a carcinogenic effect, the European Commission published a leaflet for food businesses, reminding them of their responsibilities under European law for ensuring the safety and traceability of their products.³⁷



5.4.3 Traceability and labeling

The EU defines “traceability” as the ability to trace and follow food, feed, and ingredients through all stages of production, processing and distribution.

General provisions for traceability (applicable since January 2005) cover all food and feed, all food and feed business operators, at all stages of production, processing, and distribution, although tougher standards may apply to specific sectors such as beef, fish, and GE organisms.³⁸



In most circumstances, the requirement for traceability is limited to ensuring that businesses are able to identify the immediate supplier of the product in question and the immediate subsequent recipient, although retailers are exempted.

The EU legislation on labeling, presentation, and advertising of foodstuffs to the final consumer,³⁹ based upon the principle of functional labeling, aims to ensure that the consumer gets essential information regarding the product composition, the manufacturer, and methods of storage and preparation. Producers and manufacturers are free to give additional information, provided that it is accurate and does not mislead the consumer.

5.4.4 Recall

Whenever a business operator has reason to believe that food or feed is not in compliance with food safety requirements, it must withdraw the food from the market and inform the relevant authorities. If the product has already reached the consumer, the operator must inform the public of the withdrawal and must recall products already supplied to consumers.⁴⁰

5.4.5 Food inspections

Food inspections extend from the farm to the market level. Animal health certificates must accompany all imported live animals. Upon arrival in the EU, the animals and the accompanying certificates must be verified and checked by EU official veterinarians at a designated Border Inspection Post (BIP).⁴¹ Products of animal origin from a non-EU country are allowed into the EU only if they come from an establishment specifically approved to export to the EU.⁴²

A new regulation will take effect on January 1, 2006 that clearly defines the Member States' responsibility to ensure that business operators apply EU

legislation correctly and establishes the role of the Commission's Food and Veterinary Office (FVO) as "auditor" of the Member States' performance.

That regulation includes both performance criteria to evaluate the Member States programs and a harmonized approach to the design of new control systems.⁴³ It also:

- Sets forth a framework to support developing countries in meeting EU import requirements and enables the Commission to fund activities that enhance food and feed safety
- Establishes a risk-based system for regulating food imports, based on the nature and frequency of hazards associated with the products. Consequently, import inspections can be more stringent for products with a higher risk profile⁴⁴

Food sampling and analysis to determine that food meets the residue limits are conducted as part of the EU's auditing program.⁴⁵ EU Member States must have official controls covering all stages of food production, processing, and distribution.⁴⁶ To aid these governments, the EFSA identifies emerging risks that have a direct or indirect impact on food and feed safety, and helps to standardize government controls throughout the region.^{47,48} (See Box.^{49,50})

5.4.6 Food control laboratories

To coordinate detection and monitoring of biological hazards and chemical residues efficiently in the EU, the Commission created a network of National Reference Laboratories (NRL) coordinated by Community Reference Laboratories (CRL).⁵¹ The CRLs have scientific and technical expertise in the areas of animal health, public health, and animal production and breeding. They are responsible for establishing EU-wide standards for testing, routine procedures, and reliable testing methods, and they assist NRLs, in particular, by giving technical advice, providing training courses, and conducting comparative tests.

Improving surveillance activities in Europe

The WHO has initiated a surveillance program for control of foodborne infections and intoxications in Europe. This program is based on surveillance activities at the national level and participation is voluntary.

Its objectives are to:

- *Identify the causes and epidemiology of foodborne diseases in Europe*
- *Disseminate relevant information on surveillance*
- *Collaborate with national authorities to identify methods of reinforcing their surveillance systems*

Certain areas, such as the South Caucasus region, lack independent food control laboratories, which makes the monitoring of food hazards less reliable.⁵²

Alert systems

The Rapid Alert System for Food and Feed (RASFF) provides the EU's food safety officials with an effective tool for the exchange of information on measures taken to ensure food safety.

Alert notifications must be sent to the EC when the food or feed presenting the risk is on the market and when immediate action is necessary. Alerts are issued when a Member State has detected the problem and has initiated relevant measures, such as withdrawal or recall. The notification aims to give government officials information to verify whether the product involved is on their markets, so that they can take the necessary measures. The EC publishes a weekly overview of alert and information notifications.

EFSA may supplement the notification with scientific or technical information that will facilitate rapid and appropriate risk management action by the Member States.

The Commission must inform a non-EU country in the following circumstances:

1. if a product subject to an alert notification has been exported to that country
2. when a product originating from that country has been the subject of a notification, so that it can take corrective measures and avoid repetition of the problem

5.4.7 Food contaminant monitoring and maximum residue limits

In Europe, WHO has developed the European Program on Monitoring and Assessment of Potentially Hazardous Substances (GEMS/Food-EURO), which promotes the monitoring of food contaminants in all countries in the European Region, especially in the new countries of the Balkans and of the former Soviet Union.

At the EU level, the basic elements of legislation on contaminants in food are:⁵³

- Food containing a contaminant in an amount unacceptable from the public health viewpoint, and in particular at an unacceptable toxicological level, is barred from the market. (See Box.⁵⁴)
- Contaminant levels shall be kept as low as reasonably achievable following good practices.
- Maximum residue levels (MRLs) must be set for certain contaminants in order to protect public health.⁵⁵

Moreover, the EC proposed a new regulation to harmonize the MRLs of pesticides permitted in products of plant and animal origin. According to those new rules regarding pesticides, the EFSA will be responsible for risk assessment, whereas the Commission will provide risk management by setting the MRLs, taking EFSA's opinions into consideration.⁵⁶

5.4.8 Food and feed hygiene

At the EU level, a radical revision of food safety hygiene rules is underway.⁵⁷ The new regulations will harmonize and simplify detailed and complex hygiene requirements previously contained in a number of Council Directives covering the hygiene of foodstuffs and the production and placing on the market of products of animal origin. These regulations will cover all food and all operators throughout the food chain and provide more effective instruments to manage food safety and any future food crises.

The revised rules are based on the following key measures:

- implementation of a "farm-to-table" approach
- introduction of a Hazard Analysis and Critical Control Point (HACCP) system for all food processors to assure that adequate safety procedures are identified, implemented, maintained, and reviewed⁵⁸
- registration or approval of certain food establishments
- development of guides for good hygiene practices (GHPs) and for the application of HACCP principles by food processors
- establishment of a special provision to ensure flexible regulations covering food produced in remote areas, such as high mountains or remote islands, and traditional production and methods

The new hygiene law will be applicable in January 2006. Feed hygiene is also covered in an equally comprehensive new regulation.⁵⁹

To assist non-EU countries in adopting these new standards and in organizing official controls on products exported to the EU, the EU has developed various programs, including technical assistance, joint projects, guidelines, and training. The EU also plans to create a training center where official food and feed inspectors from the European Member States and from other countries will be trained.⁶⁰

5.4.9 Animal health and food safety

Animal health is an important factor in food safety because some diseases, like brucellosis, salmonellosis and listeriosis, can be transmitted to humans through contaminated food. Each year, the EC publishes a report on sources of zoonotic agents in food, animals, and feed, and the trends in cases of human illnesses in the EU.⁶¹

In 2003, to reduce the incidence of foodborne diseases, the EC legislation regarding zoonotic agents was revised to prioritize *Salmonella*.⁶² Following the “farm-to-table” approach, the EC has introduced other tools to control foodborne pathogens along the food chain, such as microbiological criteria for specific foodstuffs.

SWEDEN



After a *Salmonella* outbreak in 1953, which resulted in 90 deaths, strict regulations were enacted designating

any food containing *Salmonella* unfit for human consumption.

The Swedish *Salmonella* Control Program, approved by the EC, aims to ensure that animal products intended for human consumption are free from *Salmonella* by only sending *Salmonella*-free animals to slaughter. This policy requires regular monitoring at all levels of the production chain. If *Salmonella* is detected, traceback is used to identify and destroy *Salmonella*-infected flocks.

Since implementation in 1961, the percent of *Salmonella*-positive poultry flocks has steadily decreased from 2.7% (1970) to 0.1% (1995). Using this strict government policy, Sweden has achieved an almost complete eradication of *Salmonella* from its meat, poultry and eggs.

The EC has approved a number of programs in Member States to control or eradicate *Salmonella* in certain animal populations, brucellosis in large and small ruminants, and tuberculosis in cattle.⁶³ (See Box.^{64,65})

5.5 Consumer organizations in the European Region

Consumer organizations in the European Region are involved in many types of food safety projects, such as food testing, developing consumer education materials, participating in the development of food legislation, and maintaining a comprehensive online resource for consumers. In addition to food hazards, groups in the European Region focus on the use of food additives, growth hormones, antibiotics, pesticides, and GE organisms.

Consumer organizations are playing an increasingly crucial role in the process of policy-making on a national and regional level. Improvements in consumer participation are sought through increased transparency of decision making, providing a framework for discussions between scientific experts and consumers, and ensuring accurate and honest information for consumers in the marketplace.

DENMARK⁶⁶

The Danish food safety system is considered one of the most progressive in the world.

A single, unified food safety agency

The Danish Zoonosis Centre, established in 1994, is the centralized coordinating body which links all the major food safety stakeholders from along the farm-to-table continuum. These stakeholders include the government agencies and institutions involved in monitoring and control of foodborne infections, the industry, and consumer groups. The Centre is also responsible for communication to the general public and to the media.

Denmark's highly integrated food safety system facilitates communication, coordination of control activities, and collaboration for data exchange and outbreak investigations. It utilizes a central database to monitor foodborne illness trends and conduct comprehensive analysis.

Linking human foodborne illnesses to animal food sources

This integrated surveillance system links public health data with data from animals and retail food, enabling Denmark to routinely attribute both foodborne outbreaks and sporadic foodborne illnesses to specific food and animal sources. This is made possible by the extensive and routine microbial sub-typing of isolated pathogens from humans, animals, and retail foods.

