



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS



Agenda Item 4

AC 05/2

**FAO/WHO Regional Conference on Food Safety  
for the Americas and the Caribbean**  
San José, Costa Rica, 6-9 December 2005

**NATIONAL FOOD SAFETY SYSTEMS IN THE AMERICAS  
AND THE CARIBBEAN – A SITUATION ANALYSIS**

(Prepared by the FAO Regional Office for Latin America and the Caribbean  
and the FAO Subregional Office for the Caribbean)

**Introduction**

1. The increasing globalization of markets, the growth of the agrifood industry, advances in science and technology and changes in consumer habits require that countries have national food safety systems that are capable of dealing with the challenges demanded by consumers and trade.
2. The availability of safe and wholesome food is the result of an integrated approach in which all players in the chain have specific responsibilities and implies the assurance of safety in all stages of production, processing, storage and distribution. Such a situation calls for the active participation of a variety of sectors, so national food safety systems should focus on establishing mechanisms of collaboration and interaction involving government, industry, academia, traders and consumers.
3. Governments' food safety policies, which need to be consistent with their aims of protecting the public and complying with international treaties, therefore have an enormous influence on the state of public health and the socio-economic situation. Hence the importance of equipping national food safety systems with updated science-based (risk analysis) legislation, that is in line with recognized standards to facilitate the honouring of commitments and international trade agreements, and that is comprehensive in perspective to cover all the links of the food chain as a single continuum ("from farm to fork").
4. Food contamination has major repercussions on public health, the national economy and trade in those products. Food-borne diseases (FBDs) constitute a widespread and growing problem of public health in the world, affecting children, pregnant women and the elderly in particular. Information from the Regional Information System for Epidemiological Surveillance of Food-Borne Diseases (SIRVETA) coordinated by the Pan-American Institute for Food Protection and Zoonoses (INPPAZ) of the World Health Organization (PAHO/WHO), although under-recorded, still reveals a total of 6 930 outbreaks of FBDs in the Americas between 1993 and 2002, with 17.8% from fish, 16.1% from water, 11.7% from red meat and 2.6% from fruits and vegetables.
5. One key feature of the Latin America and Caribbean region is that it is a major food exporter. Detailed statistics from the World Trade Organization indicate that 17.5% of the region's exports in 2003 were food products, with a value of US\$66 200 million and equivalent to 12.2% of global food exports. However, food contamination can seriously affect international trade, leading purchaser countries to reject shipments which can have serious repercussions on the economies of the producer countries. Data from the US Food and Drug Administration (FDA) report 3 645 rejections of food

consignments from the region between September 2004 and September 2005, with 77% of these rejections due to food safety problems.

6. The national food safety systems of all the countries are made up of institutions of different ministries or secretariats that operate with varying problems of intra- and interinstitutional coordination and competence, which is a reflection of the legal instruments that underpin their actions. This situation generates both duplication and absence of control and is perhaps one of the greatest challenges facing current systems. Countries have already initiated action to optimize the integration and coordination in their control systems or to create a single national governing authority, while at the same time updating and harmonizing their legislation, basing inspection and control decisions on risk analysis, and integrating all stakeholders. Existing limitations in legislation and systems of control are preventing the desired food chain approach from being applied.

7. Canada has a national food safety system that has a high degree of coordination among official institutions, a single control agency and active integration of industry and consumers.

### **Food legislation**

8. Food legislation exists in the form of food codes, health codes, regulations with force of law and distinct laws enforced by different secretariats or ministries, mainly those for agriculture, health, the economy and tourism. These in turn issue decrees, resolutions or agreements in their respective fields of competence. Other provincial or regional institutions and local governments also collaborate with the national institutions.

9. The general problem is not a lack of laws or regulations, but rather their enforcement as they are outdated and not science-based and overlap when there is more than one implementing agency. A PAHO/WHO evaluation of food safety systems in the Americas carried out in 2003 concluded that 29 of 33 countries had food legislation that was only 45% to 59% implemented, which reflected the weakness of their juridical systems in the area of food control.

10. An important aspect affecting the adjustment of food safety systems to changing circumstances is that regulatory modifications imply changes in law or regulations with force of law. The FAO/WHO Model Food Law appears highly recommendable in this regard as it allows for distinct amendment and updating through documents or regulations that can be rapidly issued.

11. Countries have public or non-profit private regulatory institutions affiliated to the ministries of economy or trade that tasked with drafting technical standards that go beyond food standards. Standards are generally agreed by consensus, are voluntary or mandatory (technical regulations) and can be complementary to obligatory regulations or become obligatory when such regulations do not exist.

12. Codex standards, guidelines and recommendations have assumed increasing importance, largely because of the WTO Agreements on Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT). The countries of the region are clearly in the process of reviewing their regulations and bringing them into line with Codex standards and are being helped in this by the National Codex Committees which include representatives of the government, academic, producer and consumer sectors.

13. At subregional level, some countries belong to economic blocs such as MERCOSUR or the Central America Customs Union which have agreed and harmonized a series of technical regulations and standards based mainly on Codex criteria.

## **Food control and inspection**

14. Responsibility for the control and inspection of food is shared by the ministries of health and agriculture whose institutions determine regulations and programmes. Other agencies and entities are also actively involved, such as local governments.

15. With regard to processed foods for the domestic market, all the countries carry out inspection visits to establishments producing, processing, packing, packaging, storing, transporting, distributing and selling food products. These visits serve to verify adherence to national health standards and are sometimes based on risk analysis. There are also annual programmes of analytical sampling. Most countries require a health register for each production plant and line of product, while others only require a health register for the plant.

16. Import and export inspection and certification systems vary but all include inspection at ports, airports and border crossings with the active involvement of the customs services. There are sometimes operational problems because of inadequate technical capacity and infrastructure.

17. The issue of safety permits is an important mechanism used by countries for the import or export of processed foods. Each imported shipment of processed food or food additives needs to have a certificate of quality assurance issued by the officially recognized authority of the country of origin. Other countries do not require safety permits and accept imported foods on the strength of the food safety certificate issued by the competent authority of the country of origin allowing the product to be freely marketed in the home country. Checks are made in both cases to ensure compliance with national regulations.

18. Inspections of imported products are generally random, depending on the product, its origin and the history of compliance. Some countries allow unrestricted importation, with importers free to enter merchandise into the national territory and dispose of it as they please.

19. In Central America, the Customs Union is intended as a single customs territory with the free movement of goods and services, regardless of origin, especially those associated with the food trade. Agreements concluded include the mutual recognition of food safety permits for processed products.

20. The seizure or detention of foods that are unfit for human consumption, adulterated, contraband or illegal and their subsequent destruction or denaturing is provided for in the legislation of all the countries, for both locally processed and imported foods. However, not all countries have legal provisions and thus procedures for the re-exportation of detained foods.

## ***Quality and safety assurance systems***

21. Quality and safety assurance programmes serve to reduce the incidence of food-borne disease, to eliminate barriers to regional and international trade and to boost income for the agricultural and livestock sector. An important function of these programmes is to verify compliance with existing legislation and thus the use of Integrated Pest Management Programmes, Good Agricultural Practices (GAPs), Good Manufacturing Practices (GMPs), Standard Sanitary Operation Procedures (SSOPs) and the Hazard Analysis and Critical Control Point (HACCP) system.

22. The status of quality assurance systems varies from one country to another. Application of the HACCP system has focused mainly on the export sector, because of external market requirements, especially in fisheries where the system has been introduced with great success. Some countries only issue official export certificates to enterprises that have introduced the HACCP system.

23. There is less application of these systems for the domestic market, one reason being the lack of financial and technical resources for implementation, especially in small and medium enterprises.

However, national authorities are clearly seeking to include these systems in regulatory provisions so that they become an integral part of the production process and protect domestic consumers.

24. Implementation of quality and safety assurance systems in individual countries represents a challenge for the traditional (and not necessarily effective) system of control and inspection based on spot checks in the production chain and laboratory testing. The traditional system will have to be adjusted and staffed with trained personnel able to audit safety management systems in the production chain on the basis of documentation. It will also need a strong training component for producers, processors, distributors and consumers.

### ***Laboratory services***

25. National food control and safety systems also need official analytical laboratories that meet international quality standards. All the countries of the region have laboratories in public, private or academic institutions, some linked to networks, which carry out various types of analysis. Some of the public sector laboratories act as national reference laboratories while others test for the release of food safety permits.

26. In 1997, the countries of the region established the Inter-American Network for Food Analysis Laboratories (INFAL) which was tasked with promoting and assuring food safety and quality, in order to prevent food-borne disease, protect consumer health and facilitate international trade, by fostering and strengthening the development and interaction of testing laboratories within the framework of integrated national food protection programmes. FAO and INPPAZ/PAHO serve as the ex officio secretariat of INFAL.

27. Since 1997, the Codex Alimentarius Commission has been recommending that laboratories responsible for the control of food exports and imports meet the requirements of standard ISO/IEC 17025 on "General requirements for the competence of testing and calibration laboratories" and that they be accredited by an appropriate agency.

28. However, although a large majority of countries have adopted standard ISO/IEC 17025, few have accredited laboratories. Examination of laboratories belonging to INFAL in 2005 reveals that of 19 countries participating in two FAO technical cooperation projects for the "Development of an integrated system of quality assurance for food analysis laboratories", 8 have accredited official laboratories with quality systems based on standard ISO/IEC 17025, while 9 have laboratories in the process of being implemented and two are at the early stages of implementation. The main deficiencies relate to specialized human resources, infrastructure, analytical technical capacity in line with reference methodologies, absence of national networks favouring decentralization, analytical criteria that are not uniform in methodology and scarce availability of certified reference materials.

29. PAHO/WHO has provided technical cooperation for the strengthening of food analysis services through INFAL, with an emphasis on quality assurance topics such as proficiency trials and distance learning through the Internet.

### **Food-borne disease surveillance systems**

30. Disease from contaminated food is one of the most widespread health problems in the world and is a major cause of reduced economic productivity.

31. A large number of countries have food-borne disease surveillance programmes or systems run by the health sector. These are generally defective because of a lack of resources, limited cross-sectoral coordination, an absence of monitoring of risk factors associated with outbreaks, a lack of training for health professionals, non-functional laboratories and, in particular, a limited notification of outbreaks,

which results in the under-recording of cases and outbreaks. Another limitation for FDB surveillance systems is their outdated legal framework.

32. There is clearly a need to strengthen existing surveillance systems by providing them with economic and technical resources that will help optimize coordination, increase training, improve laboratory implementation and involve all sectors in the notification of outbreaks.

33. Raising consumer awareness of the basic principles of hygiene in food preparation appears to be very important given that INPPAZ/PAHO data for the period 1993-2003 indicate that 33.1% of reported outbreaks in the region were due to foods consumed at home.

34. Canada has established an FDB outbreaks surveillance system which provides national data on outbreaks, identifies associated risk factors and helps develop data-based programmes of disease control and prevention. Its Integrated Outbreak Surveillance Centre operates through the Internet to improve surveillance, facilitating notification, issuing warnings and sharing information from public health jurisdictions throughout the country. Similarly, its FDB outbreak response protocol indicates how to respond to FDB outbreaks and makes sure that all agencies are promptly notified and collaborate effectively.

### **Limiting factors in national control systems**

35. Control and inspection systems for the domestic sector and for imported and exported foods have the following inadequacies which combine to obstruct the achievement of food safety and quality throughout the food chain:

- systems that are not integrated and that function sectorally, resulting in a lack of coordination between institutions because there is no communication and there are no clear lines of responsibilities.
- duplication and overlapping of functions at different levels, with municipal agencies and regional or provincial authorities sometimes in dispute over receipts from safety permits.
- systems that are not based on risk analysis to achieve safety objectives.
- shortage of professional staff to conduct food control and safety actions.
- lack of infrastructure and resources for the inspection and certification of food imports and exports.
- absence of training and updating in quality assurance systems and risk analysis or training programmes that fail to achieve their objectives because of budget restrictions or the absence of follow-up.
- no systematic organization of inspection and certification system procedures and an absence of manuals and protocols.
- no refresher training or assessment of international control point officials on food import and export procedures and risk analysis.
- failure to update import and export regulations and harmonize them with Codex standards.
- diversity of criteria for the inspection of food products entering and/or leaving the country.

36. In recent years, FAO has provided technical assistance through subregional and national technical cooperation projects aimed at reinforcing National Codex Committees. These projects have included the formulation of actions plans to modernize national control systems for food imports and exports.

37. Also in the field of technical cooperation, FAO and PAHO/WHO held a workshop on food control systems in 2004, in which were presented the FAO/WHO guidelines for the strengthening of national food control systems and country case studies on the development of related strategies.

### **Coordination of activities of all organizations involved in food safety management**

38. The fragmentation of systems into separate bodies, each coordinating food safety actions within its own specific field of competence, makes it very difficult to coordinate the food control and management system. This incurs waste in effort and resources of individual programmes and their reduced effectiveness, as well as overlapping of responsibilities and functions.

39. Countries have initiated actions to optimize coordination and resolve conflicts of food safety responsibility by creating working groups and coordination bodies, such as intersectoral commissions, and producing documents that clearly define responsibilities.

40. In Canada, the main food regulation bodies are the Ministry of Health (Health Canada) and the Canadian Food Inspection Agency (CFIA). Health Canada sets the standards and policies for the nutritional quality and safety of all foods sold in the country, which involves it in research, risk assessment and the regulation and registration of pesticides and veterinary drugs. It also assesses the effectiveness of CFIA activities. CFIA is responsible for enforcing Health Canada's policies and standards and for inspecting foodstuffs, for which it designs, develops and administers risk-based inspection programmes. Both institutions have established a protocol of agreement that identifies their respective roles and responsibilities, and determines the principles determining their effective collaboration.

### **Capacity building and establishment of partnerships**

41. National situations differ widely. Some countries are fully capable of building capacity through universities or public institutions for the training of professionals and technicians and for the training of food handlers, although they lack continuity in refresher training. Others recognize the need to strengthen their training institutions for food safety professionals and their installed capacity for food research. Resource allocation is seen as an obstacle for the building of capacity in this area.

42. Noteworthy and highly significant at international level are the food control and safety training actions of international and regional agencies and organizations, such as FAO, PAHO/WHO, the Inter-American Institute for Cooperation on Agriculture (IICA) and the Caribbean Regional Human Resource Development Program for Economic Competitiveness (CPEC). Training and skills development is sometimes given to future trainers so as to broaden the outreach of trained personnel.

43. The creation of partnerships for the ongoing training of food control officials is in its early stages. This mechanism allows communication and interaction between the public and private sectors for the benefit of consumers. Most initiatives are training in food handling for small and medium enterprises, street-food vendors and consumers, through governmental or academic institutions or NGOs.

44. In Canada, collaboration between the different levels of government is facilitated by the existence of territorial, provincial and federal food safety committees that set joint food safety priorities and facilitate the national harmonization of inspection processes. Government-industry interaction includes the supply of funds to industry for the development of food safety, quality and traceability programmes and projects covering the whole food chain.

45. The raising of consumer awareness of food safety is very important, and consumer associations are becoming increasingly involved in bodies set up to determine technical standards, in commissions appointed to review and amend regulations, and in National Codex Committees.

46. At the level of MERCOSUR, the Food Commission of the Working Subgroup on Technical Regulations and Conformity Assessment is in constant liaison with consumers.

## **Communication between all stakeholders**

47. A degree of communication between participant bodies generally exists in countries through:

- the web pages of public and private entities, national and international consumer associations, National Codex Committees and international agencies which channel information from relevant bodies and where activity programmes, health legislation and ongoing projects and programmes can be found.
- consumer agencies.
- public sector consultations and invitations to the other consumer, academic and private sectors to discuss matters of common interest relating to food safety.

## **Strategies and actions to improve food safety systems**

48. The availability of wholesome and safe foods as the result of an integrated approach in which all stakeholders have specific responsibilities and which can only be achieved through the interaction of government, industry and consumers. The current limitations in legislation and control systems prevent the ideal food chain approach from being applied.

49. The establishment of national food safety systems that apply an integrated food chain approach requires the implementation of government food safety policies, the updating of food legislation, the national implementation of integrated surveillance systems, the establishment of safety assurance systems in the agriculture, livestock and food industry sectors that protect local consumers, the application of risk analysis as the basis for decision-making in inspection programmes, the strengthening of analytical capacity of national control laboratories and their accreditation, and a good coordination of all institutions involved in food control.

50. Many different strategies and actions are being applied:

- The adoption of national plant and livestock health and food safety policies and national policies for specific product chains, such as meat and milk, that include risk analysis and seek to enhance operating capacity.
- The definition of sectoral and multisectoral measures for the consolidation of National Codex Committees, the stricter enforcement of key food and food safety laws and the establishment of national systems with greater cross-sectoral coordination.
- The formulation of framework food safety plans to steer and direct health policy and foster the stability and sustainability of national food safety systems.
- A shift from the present multiple agency system towards the creation of single bodies able to formulate, unify and standardize national food safety policies with sufficient technical, administrative and operational autonomy.
- The harmonization of national standards with Codex standards and the request for technical assistance from international agencies such as FAO and PAHO/WHO for the strengthening of national food control systems.

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