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**CONTROL OF PROCESSES IN THE CHAIN OF PRODUCTION TO
GUARANTEE QUALITY AND SAFETY OF FOOD FOR DOMESTIC
CONSUMPTION**

**THE EXPERIENCE OF URUGUAY AND THE ROLE
OF THE HEALTH SECTOR**

by

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1. Introduction

Primary sector production in Uruguay has traditionally had a dual profile; its export volumes characterize it as an agricultural exporting country, while it meets domestic demand with a wide variety of products. It is traditionally a food-producer, and foods have increasingly become one of its most important export categories.

Against the backdrop of growing trade, with a clear trend toward subregional integration, and faced with the requirements of the international markets, Uruguay first developed sanitary and quality control systems for foodstuffs developed and prepared for foreign commerce.

A privileged health situation, with a low incidence and prevalence of foodborne diseases (FBDs), also contributed to the gradual development of the food protection sector in the domestic market. This process, developed over decades, meant that food protection fell primarily to the municipal governments, specifically the Food Science Bureaus, charged by law with the “policing” of food.

Up to that point, the participation of the Ministry of Public Health was limited to sanitary interventions with a clinical-epidemiological approach in outbreaks or cases of food poisoning, although the Organic Law that created it in 1934 (Law No. 9202, Article 19) gave it the steering role in food control and protection throughout the country.

This situation began to change in the 1990s, and the Ministry of Public Health became more involved in a slow but growing process, finally assuming an ample role in the area of food safety. This involved bringing together the relevant actors and sectors and coordinating activities, providing leadership in the sector in health and food safety and protection, together with public, semipublic, and private institutions already active in this area.

2. Production of Raw Materials and Industrialization. Control of the Processes

Uruguay is a food producer. Foods are produced primarily in the agricultural and livestock sector and represent 8.3% of the country's GDP (1998). This production consists basically of livestock, since agriculture occupies only 10% of the country's usable land.

In terms of controlling primary food production, the responsibility lies with the Ministry of Livestock, Agriculture, and Fisheries (MGAP). In terms of animal production, the General Bureau of Livestock Services handles aspects relating to animal health, sectoral planning, marketing, and industrialization through its specialized bureaus in epidemiology as well as extension services, laboratory services, industrialization, and trade.

Livestock is produced semi-extensively on natural pastures, using no stables. Two of the basic categories in our production, milk and meat, amply cover the domestic market and produce surpluses for export that represent 60% of the production of meat and 60% of the production of dairy products.

Historically, meat represented the second most important category in national exports, after wool. Currently, this order is now reversed, with meat in first place and the wool sector in second place, due to a decline in sheep production and a substantial drop in the prices of woolen goods. In 1997, beef production reached record levels, exceeding the 450,000 tons (carcass weight) of 1998. Exports in 1997 amounted to 267,562 tons (INAC Bulletin) approximately 190,000 tons of which were for domestic consumption. With respect to lamb and mutton in 1997, 19,809 tons were exported (carcass weight), and the apparent domestic consumption was 15,023 tons. It is worth adding that exports also included 27,000 tons on the hoof, resulting in total production of lamb and mutton of 123,000 tons on the hoof. Milk production in the country has grown steadily over the past 20 years, reaching higher rates in 1998 than in the preceding two decades. This year, 1,416 million liters were produced, with 1,140 liters processed industrially.

These export volumes represented income to the country of US\$455 million for meat and animals on the hoof and \$141 million for exports of dairy products. This meant that the livestock sector accounted for 50.9% of GDP in 1997.

For agricultural production, the MGAP General Bureau of Agronomy Services engages in planning and control activities in the sector, based on the work of offices specializing in this type of production.

In agriculture, Uruguay produces grains for the domestic market (rice, barley, corn, sorghum, wheat), oleaginous products (sunflower seed and soybeans), vegetables (eggplants, sweet potatoes, onions, sweet peppers, lettuce, potatoes, tomatoes, and fruits (citrus fruits, peaches, apples, quince, pears, and table grapes).

As for agricultural exports, rice is in first place and citrus fruits in second, followed by deciduous fruits.

In 1998, in terms of grain production, Uruguay produced 470,000 tons of wheat, 400,000 of which were consumed in the domestic market. Production of brewing barley was 199,000 tons, 113,000 of which were exported as malted barley. Paddy rice production reached 880,000 tons, more than 90% of which were for export; corn production was 203,000 tons, all for the domestic market and for the preparation of rations, while sorghum production was 91,000 tons. Sunflower production amounted to 79,000 tons, and of these, 40,000 were for export.

In the horticultural sector, it should be noted that different situations apply for products, depending on climatic conditions in the country and the incorporation of technological change, as well as other factors. This affects production yields and, thus, the availability for the domestic and external markets. Nonetheless, in 1998, Uruguay produced 130,000 tons of potatoes. However, 1,100 tons were imported domestic for consumption due to market conditions. A similar situation occurred with respect to garlic, since with a production of 2,500 tons for the year, it was also necessary to import 220 tons. Onion production reached 30,000 tons, 20,000 of were for export. Tomato production was 165,000 tons, with import or export needs in this category based on the price of the product.

In regard to fruits, the most important category was citrus fruits, with production of 368,673 tons, less than a third of which (105,500 tons) was exported. Apple production was 57,570 tons, with exports at 9% of production. Pear production was 20,000 tons, with exports of 1,750 tons, and peach production was 24,200 tons, with 332 tons for export.

In 1997, fishing in Uruguay reached production for export of 80,000 tons, with a value of \$92 million.

In the domestic market, low seafood consumption, some 9 kg/year/per capita, means that only 5% of the volume produced is consumed locally. It is in the fishing sector, currently consisting entirely of private producers, where the National Fishing Institute (INAPE), an autonomous agency of the Ministry of Livestock, Agriculture, and Fisheries, exercises regulatory and control functions.

INAPE exercises control over the entire chain of production, from capture, to processing, to marketing. This sector was the first in the food industry to meet the demands of buyers by adopting HACCP (Hazard Analysis Critical Control Point) inspection and control procedures.

The gross value of production (GVP) in the food industry was \$2,466,716,702, representing 43.8% of GVP for the entire manufacturing sector (1996 INE Statistical Yearbook).

The country's food industry processes more than 60% of the food consumed by the population. It employs 38,143 workers, 102,353 of whom work in the manufacturing sector, ranking third in order of importance in the industrial sector. This sector represents 16.5% of the economically active population (EAP), and within that sector, food accounts for 37.26% of the labor force.

In recent years, the food industry has seen favorable developments, with transformations that have altered the characteristics of the industry. Geared basically toward meeting domestic demand, "the food industry maintained the profile of a medium and small-scale undertaking, often a cottage industry; it is based primarily on national capital; it does not have a good system for quality control throughout the food chain." (National Report, International Conference on Nutrition (1992). In order to adopt an export approach, the sector developed a process for implementing changes related to its organization and control, inspection, quality, and training systems. The growing implementation of quality control systems—for example HACCP, automation and reengineering of processes, improvements in environmental management, and quality certification through the ISO 9000 and ISO 14000 standards—are some aspects of this process.

3. National Food Laws and the Institutional Framework

Until the approval of Decree 315/94 of 5 July 1994, the Uruguayan regulatory framework with respect to food was a compilation of the municipal standards of the country's 19 departments under Law 9,515 of 1935, known as the Municipal Organic Law. Like today, this existed side by side with resolutions and decrees from public and quasi-governmental institutions associated with the food production sector (MGAP, INAC, and others).

In that same year, as the result of situation analyses conducted by the National Congress of Municipal Mayors, the Office of Planning and Budget of Presidency of the Republic was created. The Ministry of Public Health, under Decree 95/94, created the Technical Advisory Commission on Food, made up of:

- two delegates from the Ministry of Public Health (one of whom presides over it);
- one delegate from the Ministry of Livestock, Agriculture, and Fisheries;
- one delegate from the Ministry of Industry, Energy, and Mining;
- one delegate from the Technological Laboratory of Uruguay;
- one delegate from the National Congress of Municipal Mayors;
- one delegate from the associations of food producer;
- one delegate from the associations of food importers.

The creation of the Commission was based on the indisputable role assigned to the MPH under its Organic Law (9202/34), and this interinstitutional and intersectoral coordinating body began to assign importance to the Ministry's role in food protection, to lay the groundwork for an Integrated National Food Program and, in the institutional arena, to achieve the coordination of the various institutions and agencies within the sector. In this regard, with technical cooperation from PAHO, the MPH organized and coordinated the National Workshop on Intersectoral Demarcation and Coordination in Food Protection in Uruguay (PAHO/HCP/HCV-FOS/004.97), held in Montevideo in December 1996. This involved the entire institutional and technical spectrum, as well as diverse national players working in this field, promoting coordinated sectoral action in several areas (legislation, laboratories, inspection, training).

This situation evolved toward gradual application of Decree 315/94 by the municipal governments in the domestic food market, with some of them accepting the Decree in its entirety and others introducing modifications based on the Municipal Organic Law. Under Municipal Decree No. 27335 of 1996, the Municipal Government of Montevideo (the nation's capital) established and regulated its Municipal Food Technology Ordinance on the basis of National Decree 315/94.

Partial-scope regulations complete the regulatory framework with respect to specific points, but the legal instruments cited thus far provide the legal backdrop guiding the food sector in Uruguay. Clearly lacking is a truly national legal framework (e.g., a national food code) that would serve as a legal framework above and beyond the decrees cited above and establish precise sectoral macroregulations with sufficient breadth—something particularly important during times of regional trade integration (MERCOSUR). In this regard, with PAHO technical support and collaboration, the Ministry of Public Health, together with all the institutions and sectors involved, organized and coordinated the Basic Presentation Sessions directed to creating a National Food Code (PAHO/HCP/HCV-FOS/012.97). These sessions achieved a technical and political consensus on the need to promote the drafting of a National Food Code. With the consensus of the various institutions and sectors, the Ministry of Public Health, through the General Bureau of Health, worked to prepare a draft Code. This instrument, now under study, is to be submitted to the Public Health Commission of the House of Representatives, which has been officially involved in the entire process from the outset.

In Uruguay, the food protection sector is decidedly intersectoral and interinstitutional. Participating institutions include public, quasi-public and private agencies. Among the most active participants in the sector, linked through their membership in various commissions and agencies, are the Ministry of Public Health (MPH), the Ministry of Livestock, Agriculture, and Fisheries (MGAP), the National Congress of Municipal Mayors (CNIM), and the Technological Laboratory of Uruguay (LATU), as well as others responsible for specific areas.

3.1 Ministry of Public Health

There are several units within the Ministry's General Bureau of Health (DIGESA), under the Epidemiology Division, that are involved in food protection. These include the Food Hygiene Section, the Food and Nutrition Section, and the Epidemiological Surveillance Department.

The recently created Food Hygiene Section responds to the Ministry's desire and policy decision to provide greater emphasis and institutional support for different aspects of food safety. With a comprehensive coordinating approach and the goal of improving

the MPH's institutional capacity, this Section works with a multilevel approach, offering training, setting standards, and providing coordination in intra- and extrainstitutional terms.

The Food and Nutrition Section is a specialized area created during earlier organizational restructuring and, together with the Food Hygiene Section, presides over the Technical Advisory Commission on Food.

The Epidemiological Surveillance Department carries out the national work of the Epidemiological System for Surveillance of Foodborne Diseases (FBDs System) and constitutes the system's national focal point. The work is accomplished with broad intrainstitutional and intersectoral coordination, and since 1994 the Department has actively participated in the Regional Information System for Epidemiological Surveillance of Foodborne Diseases (RISES-FBD).

At present, these areas act in coordination with the strategic and policy orientation of the General Bureau of Health, which developed a plan of action to strengthen the capacity of the MPH in this area. To this end, several agencies to provide technical policy analysis and advisory services were planned and organized. The following were promoted through ministerial resolutions:

- creation of the Technical Advisory Group on Food Policy;
- updating of operations and integration of the Technical Advisory Commission on Food;
- support for Executive Decree 527/94 on Creation of the National Codex Alimentarius Commission to increase the technical participation of this Secretariat in its respective specialized subcommittees;
- appointment of national coordinators for the National Network of Food Analysis Laboratories;
- appointment to SGT3–MERCOSUR of the parties responsible for the Food Area.

It is significant that the Technical Study Group on Food Policy was created to analyze, evaluate, and advise on the measures to be followed by the MPH with respect to the topics of nutrition and food, making explicit the priority given to this area by the MPH.

The role of the MPH was fundamental to the full development of a National Codex Committee, and the MPH has held the rotating Chairmanship of the committee

twice since 1995 (year of implementation). Eight technical subcommittees were established, two of which are coordinated by the MPH: the committee on Food Hygiene and the committee on Nutrition and Special Dietary Products.

Subsequent events on intersectoral coordination have been organized and coordinated by the MPH, with support from PAHO, to strengthen interaction and coordination in the sector:

- 1996: National Workshop for Intersectoral Demarcation and Coordination in Food Protection in Uruguay;
- 1997: basic presentation sessions for a National Food Code;
- 1998: Workshop for Planning and Implementation of a National Network of Food Analysis Laboratories.

These analytical and discussion forums have provided the country with mechanisms for dialogue, consensus, and negotiation among the various institutions of the food sector, facilitating progress toward meeting the objectives established by the Government.

3.2 Ministry of Livestock, Agriculture, and Fisheries

The Ministry of Livestock, Agriculture and Fisheries has two general bureaus and a national institute with units involved in food protection: the General Livestock Services Bureau, the General Agricultural Services Bureau, and the National Fishing Institute.

The General Livestock Services Bureau includes an Animal Health Office responsible for epidemiology and control in primary production, an Animal Industry Office responsible for the regulation and inspection of the livestock food production industry, and the Veterinary Laboratories Office (DILAVE), which is responsible for supporting laboratory activities. In addition to their role in production, these organs are health agents for the control of zoonoses and FBDs. By agreement, this General Bureau, together with the MPH, make up the commission under the MGAP/MPH agreement for zoonosis control, surveillance, and research and is the agency charged with coordinating activities targeting this group of diseases.

The General Agricultural Services Bureau is responsible for organizing and implementing the protection of plant health and quality, the quality of foods of plant origin, and agricultural inputs to improve productivity, quality, and competitiveness. It

has four Technical Divisions: the Plant Food Protection Division, the Analysis and Diagnosis Division, the Agricultural Protection Division, and the Operations Division.

The National Fishing Institute (INAPE) of the MGAP is responsible for controlling production, hygiene, and safety of seafood and aquatic game. Its Technical Office oversees the areas of interest for the control of hygiene and safety, including the specialized laboratory. INAPE is part of the epidemiological surveillance system for the “red tide” and other marine toxins, interacting and coordinating with the MPH. It is also the focal point in the subregional network in this area.

The National Congress of Municipal Mayors (CNIM) has a Food Science Commission made up of the Food Science Directors of the country’s 19 municipios. Although two of these municipios lack laboratories, the other 17 have this service, whose level of development varies. There are laboratories with excellent equipment and trained professional staff such as the one in Montevideo, which acts as the system’s reference laboratory; others, such as those in Maldonado and Canalones have very good development; while the remainder have varying capabilities.

Incorporated within the laboratory or as independent services are the Municipal Inspection Services, with operating capacities that vary from one municipio to another.

Each municipio is part of the Departmental System for Epidemiological Surveillance of Foodborne Diseases (ESFBD) through the Departmental Health Bureaus, thus comprising in a coordinated and linked fashion the national system for surveillance of foodborne diseases.

The Technological Laboratory of Uruguay (LATU) is a semipublic agency, linked in the public arena with the Ministry of Industry, Energy, and Mining, and in the private arena with the Chamber of Industries of Uruguay. Created by Law N°14.416 of 1975, its function is to “conduct research and studies to improve techniques for preparing and processing raw materials and to foster the use of local or more economical materials and raw materials or the utilization of by-products.” As part of its food-related duties, Decree 338/82 granted it responsibility for “verifying compliance with the national food technology regulations governing food for import and export, testing services for the food industry, and other agencies.”

Two departments, Analysis and Testing, and Technology, have units directly involved in food protection. Analysis and Testing covers the plastics sector, microbiology, instrumental analysis, chemical analysis, imported products, and mycotoxins. Technology covers the fruit, vegetable, and industrialized grains sector, meats, and fermented beverages. Laboratory procedures have UKAS, ISO 9002, ISO 25 and EC certification.

Other areas of interest for the interinstitutional approach to food issues are the Consumer Protection Office; the Market Comptroller, a division of the Ministry of Economy and Finance; the Chamber of Industry and all its member Chambers; the Chamber of Commerce; the Association of Wholesale Warehouse Importers (AIMA); and other organizations with more limited or specialized operations.

With respect to the food trade and the impact of regulations on the regional and international integration processes, the MPH, together with other institutions, makes up the delegations participating in these technical meetings. In the specific context of the Ouro Preto Treaty, under the food heading "Safety and Health Protection," the MPH participates in two working subgroups: SGT 3 on "Food" and SGT 11 on "Health."

The Inter-American Network of Food Analysis Laboratories is a more recent project in which Uruguayan participation also assumes a multi-institutional profile and the MPH leads by coordinating the national agency. The purpose of this network in the national arena is to achieve procedural harmonization and equivalence in food analysis laboratories so as to guarantee their safety.

With respect to Codex Alimentarius and the growing importance of Codex standards on food safety and quality certification in the commercial food trade, the MPH has heightened its participation at meetings of the Codex Committee, both nationally and at international forums. It has participated frequently at international Codex events, as part of a policy expressing the priority accorded this topic, in various arenas: Codex, IOE, WTO, MERCOSUR.

4. The Food Trade: The Dynamic in the Domestic Market. Food Demand and Consumption

The domestic food trade that supplies the population comes primarily from the food processing industry devoted to livestock and seafood, the agricultural sector, especially vegetables and fruits, cottage industry or microenterprises in the food industry, and food imports. At different times and to differing degrees, social, economic, and cultural factors have had an impact on domestic food marketing.

In the cultural area, the Uruguayan population's eating habits are linked with the profile of an essentially livestock economy and its export-based agricultural sector. Although there are no recent data on food consumption and behavioral differences between rural and urban consumers, the food patterns of the Uruguayan population can basically be described from a historical perspective. These patterns showed heavy consumption of food of animal origin, with a percentage of calories from fats in excess of 30% of total calories, high consumption of saturated fatty acids (more than 10% of total caloric intake), high daily cholesterol intake (sometimes over 300 mg/day) and low consumption of fruits, vegetables, and fiber.

However, as in other countries of the Region, the dynamic in terms of the availability of foods and adequate food consumption and food safety do not depend solely on production factors.

Although to some extent the agroexport profile of Uruguay has affected the population's eating habits, other factors have accelerated changes in the population's food consumption patterns and shaped new patterns in domestic consumer behavior.

On the one hand, the price factor for certain products such as beef, and, to a lesser extent, greater consumer awareness of the factors that cause disease, have led to a decline in beef consumption in the domestic market, dropping from 70 kg per capita/per year to less than 60 kg in 1998. Also significant with respect to these types of factors is increased consumption of other types of meats such as poultry, which has risen from 12 kg to 15 kg/per capita/year in 1998 (OPYPA 1998 Yearbook).

Improvements in production systems, such as productivity per hectare, technological change, intensive land use, etc. have consistently increased the production and supply of fruits and vegetables throughout the year. On the one hand, this suggests greater availability in the market and, on the other, greater supply, which can promote consumption in these categories as well as an improvement in the quality and diversity of the diet. This is the case with apple consumption, which increased 60% over 10 years

(from 10 kg to 16 kg/inhabitant/year), and citrus fruits, where the domestic demand doubled from 60,000 tons in 1994 to 143,000 tons in 1998, including losses (OPYPA 1998 Yearbook).

In the case of vegetables, the domestic market varies, due notably to advances in production, packaging, and distribution technologies and higher imports from neighboring countries. This has led to greater domestic supply at the points of sale, making these products available virtually year round at competitive consumer prices, something that was not the case in the past.

Despite the lack of current data on consumption, the agricultural and commercial dynamic described above, together with greater supply and good channeling of consumer demand for food, makes it possible to foresee positive changes in the population's eating habits that will undoubtedly be accentuated in the coming years.

Although annual population growth was very low, demographic trends and urbanization were very important in the development of the informal food trade. Especially important has been the impact of urbanization, particularly rural-to-urban migration, the expansion of urban centers, and the social and economic consequences of these phenomena.

All of this is clearly associated with the rise of the informal economy, but migration is perhaps the most important factor in this process. The crisis in the agricultural sector, rural dwellers' expectations of a better quality of life in the city, their assessment of the opportunities to provide better conditions for their families, and other factors, have fostered and accelerated this situation.

Informal street vending of food reached a high point in Uruguay in the 1980s, although it was markedly different from that of other Latin American countries in terms of its extent and magnitude. Municipal authorities acted to control this practice, establishing regulations for food stands (requiring a fixed amount of water, solid waste management, elimination of effluents).

This topic is important because of the public health impact of this type of informal food trade and the diseases that it can transmit. The cholera epidemic in the Region in 1991 called once again for measures by the national authorities who, through joint activities involving the application of specific regulations, training activities, and the MPH epidemiological surveillance system, kept Uruguay the only cholera-free country in the Region. Currently, with respect to food imports, the MPH requires importers to ensure that food entering the country comes from cholera-free areas. This is done through the

Food Hygiene Section, granting the “cholera-free“ certificate to products that require it; this year, 4,611 of these certificates have been issued.

5. Sanitary Food Inspection and Control Systems

The Uruguayan system of sanitary food inspection and control is a coordinated system in which different agencies engage in sanitary control through their inspection and laboratory services.

Control of the domestic market, except for specialties such as meat products, for which the National Meat Institute is responsible, or seafood products, for which INAPE is responsible, fall for the most part to the food science bureaus or food regulation services of the municipal governments, with support from the MPF for certification of locales by the MPH’s Bureau of Quality Control. The technical quality of municipal inspection operations varies widely, and one of the activities undertaken by the MPH and its specialized units, with technical cooperation from PAHO, has been the training of municipal inspection personnel, consolidating technical capacity, specialization in food inspection, and the technical concepts of objectives and institutional relationships.

The most complex municipal laboratories (Montevideo, Maldonado, and Canelones) support those activities and constitute a referral system for less complex laboratories, in addition to conducting the required laboratory procedures.

The inspection sector for export trade has adopted the most up-to-date techniques required by foreign markets (HACCP), and laboratories achieve optimum levels of certification and quality (LATU, DILAVE, INAPE), with optimal training of human resources.

The FBD surveillance system, implemented in 1994, has raised public awareness about hidden and emerging health risks and fostered growing institutional concern about the subject, approached with the coordination and leadership of the MPH. Today in Uruguay, outbreaks of food poisoning are investigated, typed, and characterized; the causative agent is identified, allowing for implementation of appropriate prevention and control measures.

Training for food handlers has been another task that both the municipalities and the MPH have addressed to heighten awareness about controlling infections and food poisoning. At present there is markedly greater institutional awareness, in both the productive sector and the private food trade. Community participation as “consumers” is

beginning to emerge, although greater development and consolidation of an organized response in this area is still needed.

6. Recommendations

The new scenarios in world trade, characterized by growing globalization, regional integration, and trade in goods, have brought with them the need to consolidate changes in regulatory aspects and food protection systems in the countries. The compelling need to provide safe food for the population should be gauged and grounded in scientific knowledge and the development of plans for epidemiological surveillance of FBDs, as well as strategies to ensure food safety.

One of the greatest obstacles facing countries today in this regard is the difficulty of coordinating the activities of the various institutions and sectors charged with food protection so as to avoid the overlapping of functions and promote the rational use of resources.

Uruguay has undertaken a growing and gradual process to harmonize the different responsibilities of the institutions involved. The activities promoted by the MPH have focused on developing a vital and catalytic role in the system; they have not been confined to theoretical coordination but to coordinating activities whose strategic focus is the integration of institutions at different levels.

In addition, the MPH has promoted the search for consensus among all institutions regarding different strategies for constructing a common regulatory framework that will make it possible to implement an integrated food protection plan.

The following recommendations can be drawn from the above:

- Achieve institutional and sectoral coordination in the control of food safety by strengthening the role of the health sector in bringing the different actors together, adopting the strategic principle of institutional consensus-building in policy-making to take action to promote change.
- Draft the national framework law on food to define the responsibilities, functions, sanctions system, and regulations. This legal framework, together with institutional coordination and consensus, will ensure the necessary interinstitutional and intersectoral integration in the form of an integrated national food protection program—a program in which the health sector plays an important coordinating role as part of the primary health care strategy.

- In the coordinated implementation of food protection mechanisms, foster a trend toward the decentralization of preventive actions, inspection, and epidemiological surveillance, establishing a national laboratory network of growing complexity from the local to the national level.
- Ensure active national participation in the Codex Alimentarius as an effective form of integration in regional and international exercises to harmonize regulations and in meetings for decision-making on food-related matters.
- Continue joint efforts among institutions and technical cooperation agencies to conduct programmed human resources training activities, for management, technical staff, producers, industrial workers, and food-handlers in HACCP, ISO standards, good manufacturing practices (GMP), and standardized sanitary operating procedures (SSOP), directing action toward “self-monitoring” mechanisms to ensure food safety and quality.
- Ensure that the health sector promotes, facilitates, and contributes to technology research and development processes.

Uruguay has made progress in this area, and work is currently under way to develop a national legal framework that includes the creation of a supra-ministerial department and promotion of organized, active participation by consumers. The goal is to bring together the different oversight entities and achieve a unified inspection and control system to guarantee food safety.

Countries like Canada have been pioneering initiatives of this type, creating the Canadian Food Inspection Agency. In the United States, consumer organizations and members of Congress have pushed for important changes, in which the consumer is one of the principal factors in food protection systems. On 31 December 1998 Brazil, a member of MERCOSUR, approved the creation of the National Health Surveillance Agency (Official Journal, Measure No. 1,791), defining a new, autonomous sanitary control system for the country with its own budget. The measure is already in effect, and the Government expects swift approval from the National Congress.

The control of processes in the food production chain to guarantee quality and safety in domestic consumption will surely see profound growth and challenges that must be faced in the short and medium term.

A key characteristic in every process of this type is that it must have a leader. The health sector is willing to accept this role and continue to work, focusing on the capacity

of specialized human resources and relying on technical cooperation from agencies such as PAHO, which have been supporting the countries up to this point.