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Communication and Participation – The Experience in Mexico

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Introduction

Food safety is increasingly becoming a more relevant issue. In Mexico, the General Act for Health considers food safety and food hygiene within the concept of sanitary quality and this, in turn, within the concept of general health.

The relevance of food safety lays in that food may cause illness which impairs the individual's ability and his/her possibilities of development; it may affect the community and unbalance the organizations in which individuals participate. From the economy and social point of view, sanitary quality of food –suitable for human consumption as well as safe- is becoming increasingly important for the development of the nation, it has an influence on the expected rise in employment, on the income of capital, and on the resources available for development. The sectors of agriculture and fishery, manufacturing industry, trade, tourism services related to production, processing and provision of food, all contribute significantly to the gross national product and to capital inflow, apart from being the most important employers of the country.

There are several relevant actors involved in the production of safe food: individuals who offer products and services; the consumer; governmental organization which encourage and support individuals in their function or protect or educate the consumer, the challenge here is to get them involved and make them co-responsible for the achievement of food safety.

Relevance for Public Health

Foodborne diseases, although difficult to quantify, are considered relevant for the health of the Mexican population. Acute infectious diseases transmitted by bacteria, parasites, and viruses through one of the possible routes, food, are a relevant cause of morbidity. Furthermore, with the increased life expectancy, chronic diseases in which toxins accumulate in the body through prolonged ingestion of contaminated food are a risk factor since, they occur in adulthood affecting the quality of life, the productive performance, and causing death.

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One of the most important achievements in the health sector of Mexico is a decrease in the mortality rate. Life expectancy of the Mexican population at birth was 74 years in 1999, partly due to the decreased mortality rate for intestinal infectious diseases. In 1999, these diseases were in the 15th place among the main causes of mortality since they only caused 5,622 deaths out of 443,950 deaths that year.

Acute gastrointestinal disease statistics reported by the Single Information System for Epidemiological Surveillance include some potential FBDs such as intestinal amoebiasis, hepatic amoebiasis, cholera, typhoid fever, giardiasis, food poisoning (bacterial), paratyphoid fever and other Salmonellosis, taeniasis –cysticercosis and shigellosis, intestinal infections and wrongly defined infections, and other infections due to protozoans, brucellosis and viral hepatitis. In 1999, total reported cases of potential FBD's were 6,864,686 (See Chart I).

On the other hand, in 1999, malignant tumors, cirrhosis, and other chronic hepatic diseases and kidney failure ranked 2nd, 5th, and 14th among the main causes of death with 53,662, 27,040 and 7,807 casualties, respectively, being toxin-contaminated food a risk factor in these diseases.

Relevance for International Trade

For international food trade, food quality, specifically food safety, is increasingly becoming the key factor for success. The new rules of the game are specified in the Agreement on Sanitary and Phytosanitary Measures (ASPM) and in the Agreement on Technical Barriers for Trade (TBT).

According to these rules, the government of the country establishing them needs resources to show that the sanitary measures applied are legitimate and that national products are compliant, and so they are not biased against foreign products. The importing party or foreign exporting company demands compliance, ensuring also compliance of the suppliers in the previous steps of the productive chain and receiving decisive support from the government to show that the requirements are met and the implementation is equivalent or has a scientific base.

Globally, in the year 2000, exports in Mexico were 7.8 billion dollars and food imports were 7.6 billion dollars. The safety of exported food, particularly fresh fruit and vegetables, fish, crustaceans, and mollusks, among others, is crucial to maintain and increase Mexican exports. If the industry is not able to improve processing and self-controls, and the government does not implement the required measures for the governments of the importing countries to be confident that requirements are met, then exports will encounter difficulties to remain the same or increase, and the impact on the capital inflow, the employment rate, and the possibilities of development will be severely affected.

The safety of imported food requires increased control, free from unnecessary barriers to commodities, as well as the appropriate infrastructure in order to better identify the food which does not meet national requirements, in the same way as Mexico commercial partners monitor Mexican exports. Deficiencies in imported food control, whether actual or not, are identified by national producers as unfair trade which negatively affects the confidence of the society in the Mexican government.

At the same time, the foreign exchange revenues for international tourism in 1998 was 7,987 million dollars. Travellers' diarrhea due to food consumption may represent a barrier for international tourism incomes in Mexico. The endemic characteristic of the disease is caused by inadequate hygiene and the relatively high incidence of asymptomatic carriers, especially among caterers, as well as by the poor conditions of food storage.

Socioeconomic Relevance

The contribution of the sectors involving production, industry, distribution, sales and preparation of food and beverages to the gross national product is really significant. The important agriculture, forestry and fishery sector represented a 6% of GNP in 1998; food products, beverages and tobacco from the manufacturing industry represented 5% of the GNP, and the sector of commerce, restaurants and hotels, accounted for 21%.

Any process which may modify the way in which food producers, food processors and handlers, food vendors, or food service providers, requires to take into account the social extent of the population involved in the food chains as well as consumers, that is, the whole population in Mexico.

An estimated 36% of the total working population was involved in activities related to food productive chains, representing one of the most important employers in Mexico.

The practices for food elaboration and preparation, at any level, require to keep a balance between the changes to improve hygiene and safety control from food providers while preserving the consumers' taste and the dish aspect. For that reason, modification of hygiene practices of food providers should be influenced from the very early stages of their learning in order that the changes bring about solid and complete improvement of food safety in Mexican people's culture. Consumers spend a high percentage of their income in food, which is one of the most important satisfaction in their life, not only to satisfy a need but as an important part of their individual and community cultural life.

Food is the result of an operational chain which begins in the field, in the farm, in the pond or in the sea, when food is not yet food; the transformation of food continues during the primary stages, sometimes they are subject to industrial transformation, sometimes when sold to the consumers, and it ends when after being prepared at households or at establishments they are finally eaten.

The number of working places where activities related to food are carried out is really big. Analysis of INEGI surveys allowed to determine that the number of food production, processing, distribution or sales units is 5.3 millions of "working places" (Chart II). Possibly due to the easy accessibility to consumers and few requirements of technology and investment in working capital and fixed assets prevailing in Mexico, there are huge numbers of micro-businesses (with 15 employees or less) which represent: 99% of those involved in agricultural activities, forestry, and fishery; 95% of those involved in transformation of food products, beverages, and tobacco; 91% of those involved in wholesale trade of food; 99% of those involved in retail sales of food; 94% of those involved in preparation and sales services of food and beverages in establishments, and, 100% of the ones involved in the preparation and sales of food in the street and at households.

Micro-businesses have the highest limitations, the most important needs, even in hygiene education, they are numerous and the consumers are limited in number. Medium- and big-size companies, i.e. those with more than 51 employees, represent only 0.6% total working places. They generally have the highest number of consumers, they have increased administrative and technical capacity to solve problems to reach and keep their competitive position. They are more aware of the quality and safety of their products. And they generally have better possibilities of exporting their products and they can monitor their quality control systems. Besides, they require certification of their products, processes or systems to meet the requirements of the importing country apart from exerting stronger pressure for the government to assign resources to satisfy their needs and, paradoxically, they are thought to represent a lower risk.

To provide safe food, employees working in the productive food chain need to follow the good sanitary practices in a systematic fashion. Training, development of skills, and generation of a positive attitude to attain this may be acquired in the working place, but the possibilities are reduced for very small companies. So, the possibilities for a worker to receive education on hygienic handling seem to be reduced to primary education. The use of primary education to expose a student to information and training on how to change food selection, preparation and storage habits is a viable way for the country to build sanitary education capable of deeply changing the current situation of food safety in Mexico.

Current Sanitary Regulation, Control and Development

In Mexico, sanitary regulation, control and development of products, establishments and services is a set of preventive actions carried out by the sanitary authority in order to control, based on sanitary regulation, the conditions of the environment of humans, establishments, activities, processes, and products which may represent risks to human health, and, at the same time, to support appropriate attitudes, values, and behavior of the people and companies to encourage their responsible participation for the benefit of individual and public health.

The legal base of the Mexican food regulatory system is the General Act for Health, issued in 1984. From that time, the regulations have allowed to steadily fill in the gaps which made instrumentation of sanitary control difficult. The process of decentralization of public health services terminated in 1999 have allowed to better satisfy local health requirements.

As of 1992 an efficient model of elaboration of official Mexican standards was developed with the active participation of the industry, the commerce, the consumers, the academy, and all the governmental agencies involved. Moreover, the participation of this same actors in the Sub-committees of the Codex Alimentarius has substantially improved resulting in an increasingly proactive performance of the Mexican delegations in the International Codex Committees.

The regulatory system developed since 1991 to implement a consistent, steady, fee-from-deviations sanitary control has improved to fight historical deficiencies of sanitary regulations such as lack of administration and improvisation, deficient regulations, dissociation from epidemiological needs, insufficient trained and motivated personnel, absence of adequate and sufficient equipment and few laboratories to support the activity. Pre-market authorizations were abruptly eliminated and the technology for quality management was adapted to the function of the government and to the improvement in information technology to foster permanent progress. Sanitary control was organized to avoid discretionary application of sanitary authority, improved management of resources, and to expand its coverage. Salaries were improved, and a system for learning, training and supervision was implemented.

The system was designed for random surveillance based upon the empiric risk of establishments and products, offering representative information about surveyed establishments and products, concurrently giving attention to sanitary contingencies and emergencies, reports and claims of individuals by means of the guided program. The implementation of the product and service sanitary control system at national level has been gradual.

Up to the present, sanitary control is a governmental exclusive, but not limiting, function of the Secretary of Health (SH). In its operation, federal, state, and jurisdictional actions are coordinated and complemented at their respective levels of competence. Sanitary control and development is performed mainly for the manufacture, import, distribution, commercialization and provision of food, raw material and commodities. Nevertheless, little has been done regarding primary production, specifically for the food consumed fresh or under-processed.

Mexico, as other countries, has not had an integrated program to achieve food safety, which have resulted in some unattended sectors such as the agricultural production, where systems to reduce microbiological, chemical, and physical risk had not been implemented.

Historical Participation of other Governmental Agencies

Additionally, there are other federal government agencies which can legally promote and encourage the development of different sectors of the economy relating to food. The Secretary of Agriculture, Livestock, Rural Development, Fishery and Food (SALRDF) established in 1951 zoosanitary control of slaughter houses and meat processing establishments by means of Type Federal Inspection system (TFI), especially for the promotion of exports. Since 1988, by agreement with the SH, SALRDF assumed the responsibility for the control of imported meat and meat products. Later, in 1993, through the Federal Act of Animal Hygiene it was given the authority to carry out the sanitary regulation of other animal products through private monitor agencies accredited by the SALRDF.

As of 1997, when the United States announced the development of sanitary measures to limit the entry of food not meeting the safety requirements, SALRDF developed an aggressive development program called Integral Program of Technological Development for Food Quality (IPTDFQ) directed to fostering the importance of food safety and the application of good agricultural-sanitary practices among producers and packaging personnel, especially for fresh fruit and vegetables.

It was also in 1990 that the National Institute of Fishery started a program with the cooperation of the Food and Agriculture Organization (FAO) to train trainers to promote the establishment of HACCP systems. The Secretary of Economy, previously called Secretary of Commerce and Industrial Development, based upon the Federal Act on Metrology and Normalization issued in 1992, promoted a practical mechanism for the development of mandatory standards (NOM) and voluntary standards (NMX) for the Mexican Accreditation Entities (MAE) and private third parties such as units for the verification of commercial and sanitary labeling, which support fair trade component of sanitary control.

Building the National System for Food Safety

Due to the strategic nature of food safety, the Federal Government agreed on the establishment of an integrated National System for Food Safety, with the joint efforts of the Secretaries of Health and Agriculture, with the aim of assuring sanitary quality of food while enhancing and maintaining national and foreign markets of agricultural, livestock and fishery products to ensure safe food for the national and international population.

On the one hand, only in July 2001, SH set up the Federal Commission for Sanitary Risk Protection in order to integrate all the functions of sanitary control, that is, drugs, medical equipment and other health supplies, environmental and occupational health and food, beverages and cosmetics, in only one organism which should merge and harmonize SH policy to define and have technical, administrative and operative autonomy which allow more efficient and flexible and faster decision making based upon the best technical and scientific evidence available. This change made also possible that other federal government agencies, such as SALRDF, could participate as sanitary authority in the process of regulation.

On the other hand, the current legislation should be modified, especial the General Act for Health, in order that SALRDF be identified as the sanitary authority in Mexico through the National Service for Agriculture and Food Health, Safety and Quality. This will allow to establish regulations and control activities in the primary production sectors such as agricultural, livestock and fishery production units as well as in packaging, stores, transport and trade establishments.

Although this agreement exists at the level of the Secretaries of State, modifications to the legislation require to be passed by the Congress which in turn will survey the different sectors involved in production, handling and commercialization of food, the academy and consumers for their opinion on the legislative changes proposed.

Once the legislation has been modified, the respective regulations will be elaborated for the Agencies of the Secretary of Health and the Secretary of Agriculture which will be responsible for food safety; furthermore, to make this cooperation effort between the two Secretaries formal, a Cooperation Agreement for Food Safety will be made.

In Mexico, every modification to the law and regulations, as well as every new legislation, require public comments to attain transparency and the possibility for all the population to give their opinion on the legislation proposed.

The National Service for Agriculture and Food Hygiene, Safety and Quality (NSAFHSQ) is aware that no legislation is completely effective if it is not communicated to the consumers and general public in a simple way. For that reason, a General Office for Consumers' Communication has been established with the aim to inform the general public, especially users of the office's services, about the legislation and regulations in force, for a more effective compliance, and in order that the general public be confident about the work performed by the federal government.

Recently, in February this year a National Forum on Food Safety was carried out with the participation of consumers, industry, academy and farmers, producers, traders, and state governments, in order to hear proposals on the strategy the federal government should develop to attain safety food production. All agreed that food safety should be a priority issue for the federal government and that it was necessary to have an agency exclusively aimed at performing this task and they also agreed on the need to issue regulations or a specific law to regulate food production from the farm to the table.

This regulating agency has been established as the National System for Food Safety, which will have a Technical Council where the different involved sectors will participate and which will function as a guide to define the policy on this issue and actions taken on this matter will be presented to it.

Currently, a Master Plan on Food Safety is being elaborated including different activities for different sectors, among which the following can be mentioned: promotion of the establishment of Good Agricultural Practices; Good Production Practices; Standard Sanitization Procedures; Risk Analysis and Critical Control Points. This promotion is intended for agricultural, livestock and fishery producers and will be mainly focused to primary production.

Moreover, a promotion program will be carried out to the consumers' sector to direct their preferences towards products having safety quality brands. It is worth mentioning that we presently have a similar system for meat, sausages, and chicken, especially for export products.

It is also deemed necessary to establish a training program for housewives to foster hygiene practices and handling of food at households, since a high percentage of foodborne diseases occur due to inadequate food handling in the household.

Besides, training courses for professionals and producers are being planned for the application of systems to minimize risks and make the process of their establishment in production units easier.

In order to gain the consumers' confidence on the work performed by the federal government in food control, bulletins or reports on the NSAFHSQ activities will be published or issued in order to counteract distorted information, lacking scientific support, disseminated through certain media.

In order to attain effective activities from the Federal Government, cooperation agreements with the States will be signed to delegate some control and follow-up activities of the State Programs for Food Safety.

Also, awareness programs will be established with producers' associations to facilitate the process of establishing risk reduction systems.

This initiative implies several interaction activities with different sectors; nevertheless, we consider that the opinions given at the Global Forum for Food Safety Regulators will allow the establishment of new communication and participation strategies of the different sectors.

Conclusion

Food safety is crucial for Mexico's development because it has an impact on the health of the population, job creation, investments inflow, fair trade of food, and, globally, on the efficiency and productivity of the nation. While contaminated food is a concern involving the functions and responsibilities of different sectors, coordination, an integrating strategy, an explicit definition of responsibilities to achieve food safety from the farm to the table; and the design of models which allow to measure the contribution of food safety to the objectives of the policy of each participating organization are needed.

Chart I. Reported Cases of Potentially Foodborne Diseases

Diagnosis	1998	1999
Cholera	71	9
Typhoid Fever	11,546	8,893
Intestinal Amoebiasis	1,613,215	1,516,845
Giardiasis	78,475	63,056
Intestinal and wrongly defined infections	5,023,427	4,862,618
Other protozoan intestinal infections	109,876	124,303
Paratyphoid and other Salmonellosis	215,155	181,239
Bacterial food poisoning	35,081	42,661
Shigellosis	45,372	39,029
Taeniasis	3,061	3,195
Brucellosis	3,550	2,719
Cysticercosis	1,061	920
Viral hepatitis A	18,695	19,199
Total	7,158,585	6,864,686

Source: Single system of information for epidemiological surveillance, 2000, 2001, Secretary of Health

Chart II. Working place by number of employees (thousands)							
Activity	Total	1 person	2 to 5 people	6 to 10 people	11 to 15 people	16 to 50 people	51 or more people
Agricultural activities, forestry, and fishery	3,538	1,625	1,798	83	12	13	7
Transformation of food products, beverages and tobacco	347	201	113	14	3	6	10
Food wholesaler establishment	59	29	17	5	2	3	3
Food retailer establishment	914	606	279	16	3	4	6
Preparation and sale services of food and beverages in establishments.	196	53	107	19	6	7	4
Preparation and sale of food and beverages on the street and in households	273	198	74	1	0	0	0
Total	5,327	2,712	2,388	138	26	33	29

Source: Own elaboration based on INEGI, 2000

Note: Average of each size of working place, according to number of employees, was obtained and then the average by activity was calculated.