Food safety in international trade
Kazuaki Miyagishima & Fritz K. Käferstein

International approaches are indispensable in the management of foodborne risks to health. The contributions made by WHO and the World Trade Organization to achieving food safety are discussed below, and particular reference is made to the Agreement on the Application of Sanitary and Phytosanitary Measures and to the work of the Codex Alimentarius Commission.

As the scale of international trade in foods increases (probably close to US$ 400 000 million in 1997), there is a growing threat from foodborne pathogens. Hazards may also occur in the form of mycotoxins, pesticide residues and other substances, the presence of which in foods may lead to the rejection or destruction of consignments in importing countries. Food safety standards and codes of hygienic practice have been established and applied internationally in order to protect consumers’ health on the one hand and break down unnecessary import barriers on the other.

International trade agreements

The Uruguay Round of Multilateral Trade Negotiations, concluded in 1994, led to agreements that entered into force in 1995 with the establishment of the World Trade Organization (WTO). Of particular importance for the trade in foods are the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) and the Agreement on Technical Barriers to Trade (the TBT Agreement). WHO has observer status on the committees of the WTO which administer these Agreements, and provides countries with both normative and technical support for food safety.

The TBT Agreement is designed to encourage the development of international standards, technical regulations and conformity assessment systems in order to facilitate trade. Among other things, it deals with various aspects of food labelling and with claims relating to health and nutrition which are made for food products. The international approach to the regulation of food labelling is vital as a means of avoiding confusion and preventing deception. The TBT Agreement also covers other health-related commodities, medicinal products and medical devices.

The SPS Agreement aims to ensure that measures taken by countries to protect human, animal or plant life or health are based on sound principles and scientific evidence, and that they are not used as a pretext for erecting technical barriers for the defence of domestic markets. With regard to food safety, it specifically indicates that the standards, guidelines and recommendations established by the Codex Alimentarius Commission (see

Dr Miyagishima is Associate Professor, Department of Public Health, Faculty of Medicine, Kyoto University, Yoshida-Konoe-cho, Sakyo-ku, Kyoto-shi 606-8501, Japan, and Dr Käferstein was the Director of the WHO Programme of Food Safety and Food Aid until 1998.
below) will be the international reference for harmonizing national measures regarding food additives, veterinary drug and pesticide residues, contaminants, methods of sampling and analysis, and hygienic practice.

Adherence to the SPS Agreement provides opportunities for upgrading national food safety programmes with assistance from international or bilateral cooperation agencies. WTO members agree to provide technical support to exporting developing countries, which may be required to invest substantially in order to meet sanitary requirements. In this way the protection of consumers’ health can be improved and confidence in exported products strengthened.

The guiding principles of the SPS Agreement – harmonization, risk assessment and equivalence – provide a rational framework for the application of food safety measures internationally. WTO members are required to base their measures on Codex provisions, where such exist. This harmonization of food safety measures serves the two objectives of easing trade between countries and protecting consumer health. In doing so, countries obviate the need to provide other Member States with reasons for the measures they take to protect health.

The SPS Agreement recognizes the right of Member States to set higher levels of sanitary protection than the Codex indicates if this is justified by scientific risk assessment. The measures adopted must be non-discriminatory and no more restrictive of trade than is necessary. In applying a particular sanitary measure it is important to recognize what health protection can be expected as a consequence. Where two or more measures are equally effective in achieving a given level of protection, Member States should accept them as equivalent. Exporting countries should be able to demonstrate that their measures achieve the level of protection laid down by importing countries.

Members also agree to publish all sanitary and phytosanitary measures they adopt, for each other’s information. This requires a transparent interactive procedure for identifying potential hazards and defining measures for controlling them. Governments also have to ensure that they acquire the basic capacities for using the methodology of risk assessment and carrying out the laboratory analysis of foods.

**The Codex Alimentarius Commission**

WHO and the Food and Agriculture Organization of the United Nations (FAO) set up the Codex Alimentarius Commission in 1962. The Commission is an intergovernmental body open to all Member States of WHO and FAO. At present it has over 160 members. It has established over 230 food commodity standards and over 40 hygienic and technological practice codes; more than 50 veterinary drugs and 760 food additives have been evaluated, over 3200 maximum levels of pesticide residues have been set, and 25 guideline levels for contaminants have been specified. Guidance is also given
on food labelling, claims made for foods, and information exchange relating to the inspection and certification of imports and exports.

There are usually debates at committee level before draft texts are submitted to the Commission for adoption. Governments and other interested parties contribute to the production of Codex texts. Many of the committees that work for the Commission deal with specific commodities, but those standards and guidelines that apply to a wide range of foods are developed by general subject committees. These cover food hygiene, additives and contaminants, pesticide residues, veterinary drug residues, labelling, methods of sampling and analysis, inspection and certification systems for imports and exports, nutrition and foods for special dietary uses, and the working principles of the Commission.

The Commission has taken steps to ensure that it can fulfil its role under the SPS Agreement. Its subsidiary bodies have begun to incorporate the principles of risk assessment, management and communication into their working procedures so as to strengthen the scientific accountability of the Commission and its texts.

At present, unfortunately, only half the Member States attend the sessions of the Commission, and only half the delegations include a representative of the health sector. Thus some countries run the risk of not having their interests represented when standards are set. It is clearly desirable to improve this situation and to strengthen national infrastructures through the establishment of national Codex committees or contact points, thus helping to bridge the gap between national and international food safety strategies.

The Codex Alimentarius has become one of the strongest tools for the international harmonization of food standards. WHO strives to ensure that Codex standards, guidelines and recommendations protect the health of consumers and that the public health sector participates in the Commission’s work.

The Commission receives scientific and technical advice from the Joint FAO/WHO Expert Committee on Food Additives, the Joint FAO/WHO Meeting on Pesticide Residues, and other bodies. The soundness of decisions on risk management depends on the quality of risk assessments made by these bodies. Their activities are supported by the International Programme on Chemical Safety, run jointly by the International Labour Organisation, the United Nations Environment Programme, and WHO. Guidelines drawn up for the determination of drinking-water quality have provided a basis for the development of national and international standards in this field.

**Controlling hazards internationally**

Microbiological hazards in food are a major concern. Cholera, for instance, a notifiable disease under WHO’s International Health Regulations, is one of the infectious diseases that can lead to a significant fall in a country’s exports of food. However, there is only a minimal risk of transmitting it through the exporta-
tion of food commodities if these are produced in accordance with good manufacturing practices, and there have been no reports of cholera cases associated with commercially imported consignments: food import restrictions should not be imposed simply because cholera is endemic or epidemic in a country (see box). When cholera broke out in Peru during 1991, over US$ 700 million were lost because several countries imposed bans on imports of Peruvian fish and fishery products, yet this measure was not necessary to prevent the introduction of Vibrio cholerae into their territories.

WHO responds rapidly to instances of newly emerging diseases whose route of transmission may involve food. In view of the theoretical risk of transmission of bovine spongiform encephalopathy to humans, WHO has convened consultations and issued recommendations for the protection of public health. Many of the recommendations have been addressed to governments so that they can apply measures based on scientific knowledge and evidence. These and other activities of WHO serve to further the international harmonization of measures aimed at protecting public health.

——

A considerable number of governments have to upgrade their food safety pro-

grammes urgently in order to meet the terms of the SPS Agreement. Some governments have recently experienced rigorous scrutiny following emergencies in this field and are striving to regain or augment public confidence. Others are trying to restructure their national food safety authorities with a view to providing improved health protection. It is essential to incorporate action on food safety into public health activities at all levels. The gap between food safety activities as part of primary care at the local level and food safety risk management at the international level is becoming insignificant.

WHO is revising the International Health Regulations, taking into account current trends in the epidemiology of communicable diseases and the volume of

Cholera outbreaks have not been related to commercially imported foods

At present, WHO has no information that food commercially imported from affected countries has been implicated in outbreaks of cholera in importing countries. The isolated cases of cholera that have been related to imported food have been associated with food which has been in the possession of individual travellers. Therefore, it may be concluded that food produced under good manufacturing practices poses only a negligible risk for cholera transmission. Consequently, WHO believes that food import restrictions based on the sole fact that cholera is endemic or epidemic in a country are not justified.

— From WHO’s Fact Sheet No. 107, distributed by WTO to its Member States in February 1998 during the cholera epidemic in several African countries which had caused a number of countries to place an embargo on certain fishery products.
international traffic and trade. The possibility of linking the revised Regulations to the World Trade Organization’s multilateral trade scheme is being explored. WHO’s role in providing health guidance and expertise based on sound science is increasingly important in the environment represented by the World Trade Organization and its dispute-settling procedures. Countries’ health, agriculture and trade sectors should perhaps pay more attention to this linkage, and should work together to develop coherent national policies on food safety.

Food security and food safety

In terms of health, it is the shortage of food which constitutes the main problem in many parts of the world. It is a striking paradox that while millions are unable to obtain the daily minimum subsistence food ration – among them millions of children suffering from malnutrition – others suffer from obesity and other problems related to overeating. . . . Food security depends on global production and the structure of the world food market. Many countries do not produce enough food to feed themselves, and the international community has not succeeded in establishing a sustainable situation for the poor countries. While there are “food mountains” in one part of the globe, people starve in another.

The world still faces great problems of foodborne diseases associated with contamination of the food supply. WHO estimates that each year there are 1300 million cases of acute diarrhoea in children under five years in the developing world. A substantial number of these are due to microbially contaminated food. It is also clear that much good is lost as a result of spoilage. Other threats to safe food include different chemicals that end up in our food products – pesticides, fertilizers, veterinary drugs, food additives (preservatives, sweeteners, colouring agents) and various pollutants from industrial waste as well as natural toxins. Some of these agents enter the food chain because people are unaware of their dangers.