

Emerging Issues in Agricultural Health and Food Safety "Towards a New Approach"

INTRODUCTION

Traditionally, countries' approach to sanitary and phytosanitary protection has been to focus almost exclusively on what is happening within their own borders. To protect themselves from external threats, they reinforce border controls, restricting or inspecting what comes into their national territory. With this kind of approach, there is no room for proactive actions or prevention strategies - only for reaction when a plague or disease has entered the country, or is imminent.

In the last ten years, the threat of diseases and infectious pests has changed dramatically, in tandem with the transformations experienced by society, the environment, and commercial exchange. Bovine spongiform encephalopathy (BSE, or "mad cow disease"), the dioxin scare in Belgium, avian influenza in Hong Kong, the pink mealy bug in the Caribbean, and the carambola fruit fly in Surinam, are examples of emerging issues for Agricultural Health and Food Safety Systems, not only in the countries directly affected, but also globally.

- All the cases mentioned are of biological origin, and three of them display characteristics that are different from previously known infectious processes. This forces Agricultural Health and Food Safety Systems to keep abreast of cutting-edge advances in the scientific knowledge of these diseases.
- The likely impact of such diseases on public health and animal health and plant protection is of alarming proportions.
- Geographical implications are very widespread, potentially affecting several continents.
- The economic impact has already been felt directly in affected countries. Indirect impacts have not yet been assessed fully.
- In three of the five examples given, scientific and technological knowledge is still seriously incomplete. No answers have yet been found to important questions involving their epidemiology, diagnosis, surveillance, and control methods.
- These matters are of concern not only to specialized publications and to those sectors that have been directly affected, but to the public at large, given their high international visibility in mass media such as print, radio, television and the Internet.

These changes call for a new approach in which emerging issues are promptly identified and acted upon, instead of waiting for an epidemic to strike. The concept of "emerging issues" must be incorporated into all the basic activities of a modern Agricultural Health and Food Safety System. It covers all those issues of biological origin, including exotic pests and diseases, that can have a negative impact on the competitiveness of agricultural and agri-food chains, international market access, the environment, public health, animal health, and plant protection. This concept seeks to complement the traditional approach to food safety, based on emergency response to an outbreak of a given disease or pest. Traditionally, international organizations such as FAO, PAHO, IICA and the Regional International Organization for Plant Protection and Animal Health (OIRSA) have supported the development of national emergency mechanisms to respond quickly and effectively to the arrival of exotic diseases or pests. Examples from the hemisphere include the ALFA Plan, AUTOSIM, and SIDESA. But such strategies remain largely reactive. The process of identifying a potential emerging issue in timely fashion begins with an understanding of agricultural and agri-food chains and the dynamics that can affect them. This requires the ability to look beyond one's own borders. Such knowledge can only be obtained when there is regular participation in international forums, effective cooperation between the public and private sectors, and a

surveillance and information system that can make effective use of modern risk analysis tools. This combination enables the timely detection and early response to biologically oriented events, allowing countries to develop better intervention mechanisms and budget their resources in the most effective way to position themselves competitively in global markets.

IICA's Directorate of Agricultural Health recognizes the need to support member countries' capacity-building efforts, particularly those aimed at the early detection of emerging issues and their impact on global competitiveness, access to markets, the ecosystem, animal health and plant protection, and of course public health. In order to provide such support, IICA launched a survey on emerging issues and how they are seen by member states. This short paper is the first of a series of documents that aim to introduce this new approach to IICA's constituencies and raise awareness of its crucial importance to our countries' economies and inhabitants.

The survey revealed that Agricultural Health and Food Safety Systems are still largely incapable of recognizing and responding to emerging issues. Regardless of their technical sophistication, these Systems continue to focus their attention on traditional exotic diseases and pests. National sanitary and phytosanitary activities must incorporate a critical assessment of the opportunities available to identify such issues at the earliest possible stage and create effective mechanisms to prevent their emergence in the first place, and of course to stop the incursion of such diseases. The lack of such mechanisms can lead to considerable economic losses, and the significant increase in the movement of people, animals, plants and food products, as a result of trade liberalization, only aggravates this threat.

EMERGING ISSUES IN THE HEMISPHERE

IICA's survey to identify emerging issues in the Americas involved agricultural health and food safety stakeholders in 24 members countries spanning all five regions. The survey revealed a slight increase in their awareness of these key issues; however, much remains to be done. Of the 105 issues reported, only 22 (20%) differed from traditional exotic or endemic pests and diseases. Be that as it may, analysis of the collected data will serve as a first step towards supporting member countries' decision-making processes and timely actions in this field. The chief emerging issues detected in the Inter-American survey were the following:

- The development of resistance to antibiotics, antiparasitic drugs and acaricides, as a result of the evolution of infectious agents and pests. The indiscriminate and excessive use of these products has exerted selection pressures on etiological agents, leading to drug-resistant organisms. This resistance has grim implications for the economy and human health. Increased resistance is not just a result of poor product handling. The inability of Agricultural Health Systems to regulate the industry effectively, producers' frequently limited access to education, the lack of professionalism on the part of technical assistance services, and the poor ethics of some intermediaries all play a role.
- Mycotoxins in poultry production. Trade integration and liberalization has had the unfortunate side-effect of increasing the incursion of pests and diseases into previously disease-free countries or regions. Reports show an apparently causal correlation between the prevalence of mycotoxins and massive imports of low-priced grains from trade block partners whose climate conditions, particularly high heat and humidity, favor infestations by the fungi that produce these toxins. Local producers and technicians, unaware of the symptoms, cannot carry out a timely diagnosis. To make matters worse, food safety laboratories are not capable of analyzing and identifying the toxins. Damage to the industry and human health could be serious.
- Cystercercosis. Massive migrations due to natural disasters or political and socioeconomic conflicts in Central America have led to the reemergence of cystercercosis, as a result of the cultural habits of the displaced populations. The combination of these habits with the extensive production methods used in host countries has caused an increase in reported cases, which pose a threat to local public health.

- Lack of international organic farming standards. The lack of international organic farming standards, and the evolution of international health and trade standards, can affect member countries, fundamentally due to their low participation in international reference organizations such as the OIE, CODEX and the International Plant Protection Convention (IPPC). In the hemisphere, members from the Southern and Northern Regions were found to participate actively in these organizations. However, of the 24 countries in the survey, only eight of them participated actively in the "Three Sisters", five of them from the Southern Region. By contrast, only two Andean countries, one from the Central Region, and none at all from the Caribbean Region were active participants. Local or regional interests cannot be safeguarded effectively in these circumstances. Organic production is evolving rapidly in the hemisphere, but there are no well-defined international standards and parameters. If the countries that promote this production system do not act quickly in international forums, any farmer with muddy boots and poorly packaged goods will label his production organic, discrediting this new form of agriculture. Besides, the impact on public health could be high. In the survey, coccidia contamination was reported in some organic produce.
- Livestock traceability in the cattle industry. Larger countries that practice extensive farming methods and have millions of heads of cattle are not prepared to implement a national identification and traceability system. Smaller countries also lack the organizational capacity to face this challenge, due to the absence of effective agricultural health systems and up-to-date land registries.
- The use of growth hormones. Many meat exporting countries in the hemisphere like to use them, but suffer the consequences of an European ban on meat products from hormone-treated livestock. They question the fairness of the European Union's unwillingness to make a distinction between scientifically accepted drugs and those that have been rejected by science. They also worry about the impact of misinformed consumers' purchasing decisions, including boycotts.
- Equivalence problems. Several countries mentioned equivalence problems in post-harvest treatment and certificates of origin. These countries complain that their foreign trade is affected by importing nations refusing to accept the equivalence of exporting countries' food safety standards in reaching comparable levels of consumer protection and agricultural health.
- Inaccurate official health certificates from trading partners. Some countries reported that diseases such as Q fever, Maedi Visna, and Scrapie were detected in quarantine ports among livestock that was "officially" free from them. This calls for a revision of current certification procedures.
- Changes in production methods that increase plant and animal stress. A link has been recognized between such additional levels of stress and increased susceptibility to pests and diseases. Emerging and re-emerging issues listed included avian influenza, Newcastle disease, Marek disease and *Ornithobacterium rhinotracheale* infections. In the case of vegetables, examples included fruit flies and citrus diseases such as canker and tristeza.
- Opposition to the use of transgenic seeds developed through biotechnology. Several countries reported an increase in opposition to genetically modified food products, even when there were no scientific grounds for such concerns. In some cases, badly informed consumers have been swayed by environmental groups. Transgenic crops such as corn and soy are of particular concern for countries in the Americas. In many exporting nations, these products have displaced traditional crops due to their improved resistance to pests and diseases and their increased tolerance of wide-spectrum herbicides. The application of unjustified trade barriers to such exports, due to lack of internationally agreed-upon standards, could place the economy of member states at grave risk.

Although the following issues were not identified as emerging issues by officials of member countries' Agricultural Health and Food Safety Systems, they might easily arise as grave threats in the near future:

- The environmental impact of production systems. All nations have the sovereign right and obligation to protect human, animal and plant health. This includes wildlife. At present, there is a worldwide trend towards protecting the environment and biological diversity. However, when environmental protection protocols are not based on sound scientific data, they can set back countries' sanitary and phytosanitary measures and threaten public health.
- Animal welfare. Particularly in Europe, there is a trend towards protecting the welfare of livestock. This might lead to trade barriers not contemplated by the WTO's Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Member countries need to remain vigilant of this trend, so as not to be taken by surprise.
- The role of the consumer. There is nothing more dangerous than a misinformed consumer. Of course, the consumer has the right to make his own decisions and participate in the broader social decision-making process regarding food quality and safety. In order to do this effectively, however, consumers must be well informed. Otherwise, they can be easily manipulated, putting the productive sector at risk.

WHAT CAN BE DONE TO DEAL WITH EMERGING ISSUES?

The following guidelines are logical responses to the problems detected:

- Participate actively in international reference organizations (IPPC, OIE, CODEX) and their working committees, in order to defend national interests and ensure that they are taken into account. Monitoring the evolution of international standards and likely trends in agricultural health and food safety must be a part of this strategy.
- Establish an agile consultation mechanism to define national and regional positions on proposals for international standards that arise in the context of the Three Sisters and the SPS Agreement.
- Maintain a dynamic surveillance of agricultural and agri-food chain processes pertaining to animal health, plant protection and food safety.
- Engage in methodological capacity-building for risk assessment, in order to facilitate the response of decision-makers to the most pressing threats (risk management).
- Be capable of demonstrating the equivalence of the food safety processes that have been certified by national agricultural health systems.
- Analyze the new trends in agriculture that still lack international standards, such as biotechnological advances, organic production, and the environmental impact of production systems.
- Monitor consumers' concerns and opinions regarding food safety. Food safety issues and consumer responses will likely guide governmental policies and trade priorities in the coming decades, given the spread of new pathogens, the growing movement of people and products across national boundaries, and the rapid urbanization of countries, which generates changes in dietary habits and food handling methods. The "from the farm to the table" approach will increasingly be the standard throughout the Americas.

The first step that member countries must take is to start paying attention to the emerging issues reported in the survey, and any others that may arise. They must act now to modernize their Agricultural Health and Food Safety Systems. Finally, they must look beyond pest and disease control and eradication, and bear in mind that food safety and consumers' concerns will be the benchmarks of the future.