by **Raymond Saner** and **Ricardo Guilherme**

# ISO 22000's potential impact on world trade in agricultural products

Hardly a day goes by without the media reporting on the difficult negotiations within the World Trade Organization (WTO) and the threat to international trade should there be no successful conclusion to the Doha Round.

The problem most often reported centers around market access for agricultural products from developing countries that cannot pass the prohibitively high level of tariffs of the industrialized countries.

Many of the developing countries suffer from deep poverty. The only products they can sell are agricultural products. Developed countries, on the other hand, are justifiably worried about health risks due to food poisoning and other food-related illnesses. The situation seems impossible to solve.

However, ISO 22000, *Food safety management systems – Requirements for any organization in the food chain*, has the potential to bridge some of the gaps between the rich importing and the poor would-be exporting countries.

## Food safety and international trade

To give an idea of the global importance of the food and agriculture sector, we can note that the European food industry alone represents a sector valued at USD 700 billion dollars and employment for more than 2,6 million people.[1)]

Efficient and harmonized measures to ensure safe and adequate food supply chains and food management are of paramount importance to the citizens of all countries. For example, the worldwide concerns linked to genetically modified organisms and plants, avian flu or foot-and-mouth disease are examples of how such concerns affect our daily lives.

To respond to such concerns, safety measures have been developed by different international organizations like the Food and Agriculture Organization (FAO), the World Health Organization (WHO), the WTO and ISO.

While obviously necessary, each measure taken to ensure food safety and to ensure against food-related illnesses has potentially devastating impacts on the exporting countries, especially from developing and poor regions of the world.

The importance and potential negative impact of food safety measures is even higher in developing countries, since the share of agriculture in GDP, as well as with regard to total population engaged in agriculture, represents major proportions in many of these often very poor countries (see **Table 1**).

1) "The Sixth Framework Programme – new research opportunities for SMEs", at **http://sme.cordis.lu/thematic/home.cfm** (as of 7 December 2005).

| Country | Share of agriculture in GDP | Share of total population engaged in agriculture |
|---|---|---|
| Bangladesh | 30,0 | 59,6 |
| India | 27,0 | 56,8 |
| Kenya | 29,0 | 77,1 |
| Pakistan | 26,0 | 52,6 |
| Senegal | 18,0 | 75,0 |
| Developing countries (average) | 26,3 | 50,4 |

Table 1 – *The importance of agriculture to wealth and employment in developing countries.*

FAO, "Agriculture, Trade and Food Security: Issues and Options in the WTO Negotiations from the Perspective of Developing Countries", Geneva, 2000, Volume II (GDP data taken from World Bank, *World Development Report*, 1998/99).

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## Impact of SPS measures – Kenya

The widely publicized case of European Union (EU) restrictions on fish exports from Lake Victoria in Kenya in 1997 gives us a glimpse of how hard food safety requirements and subsequent import restrictions can impact developing countries.

The region of Lake Victoria was responsible in 2001 for over 95 % of all Kenyan fish landings (with Nile perch as the dominant species), having experienced a population inflow around the lake border of more than 1,2 million people in just two years. It is also worth noting that in the 1980's and 1990's, Kenyan fishery was almost totally export-oriented, mainly to the EU.

However, due to several concerns related to hygiene, salmonella detection, pesticide residues and a cholera outbreak in East Africa, the EU practically banned importation of fresh fish from that region in 1997. This caused Nile perch exports to fall from 14 143 tonnes in 1996 to 10 881 tonnes in 1998, with export value dropping dramatically from USD 43,9 million in 1996 to USD 29 million in 1998.

ITC and Commonwealth Secretariat, "Influencing and Meeting International Standards – Challenges for Developing Countries", Geneva, 2003.

Therefore, long-lasting food safety problems may result in very negative impacts on the economies of poor, developing countries (see box, **Impact of SPS measures – Kenya**).

The same holds true for stringent food safety compliance requirements – such as water treatment and fumigation requirements, maximum residue limits of pesticides and technical requirements higher than those in international standards – imposed on poorer and smaller nations (see box, **Standards and non-tariff barriers**).

Ideally, food safety measures should safeguard the lives of the consumers while minimizing negative impacts on food producers whenever possible. Unfortunately, what is legitimate (food safety) is sometimes mixed up with illegitimate goals (protectionism of local food producers resulting in discrimination against foreign food producers).

ISO 22000 has the potential **to bridge some of the gaps between the rich and the poor countries**

As the European Union (EU) Trade Commissioner, Peter Mandelson, has asserted, "…future challenges in trade policy [will be] in the so-called non-tariff barriers to trade, to which the question of standards is crucial … If not managed with care, these measures can be impediments to trade which are difficult to justify."

He went on to say, "[It must be] confusing for a third country to receive one of 25 different national certificates for a product that is subject to harmonized EU rules". He added: "…we must not allow our standards to be based on prejudice, or as a response to pressure groups. The basis for them has to be sound scientific analysis."

## Standards and non-tariff barriers

Standards and non-tariff barriers can prove quasi-insurmountable obstacles when practised against least developed countries and small island nations. The case of Jamaican pepper is an example of how difficult compliance with sanitary and phytosanitary measures (SPS) can become.

Jamaican hot pepper is a priority yield suitable for small producers, and directed to both domestic and foreign markets such as the US, Canada and Mexico. However, exports are currently lower than they were a decade ago.

Among other factors such as marketing and production problems, food safety issues, like a gall midge infestation in 1997, prompted the US to demand fumigation on all peppers exported from Jamaica, including bell and chili peppers (even though the gall midge pest had been only detected in hot peppers).

Quick action was taken by the Jamaican government to solve the issue, but the comprehensive measures requested by the US meant only that production costs would increase for Jamaica. To make matters worse, the Jamaican Hot Pepper Task Force and the US Animal and Plant Health Inspection Services (APHIS) agreed, in 2002, on a 10-point SPS system to remove the fumigation requirements

In the event, Jamaica did not implement the system, highlighting the considerable problems that US measures have caused to Jamaican exporters. As the World Bank says, while the Jamaican government has been proactive to respond to the problem, pay-offs were close to zero and exports virtually crumbled.

Henson, Spencer, and Jaffee, Steve, "Jamaica's Trade in Ethnic Foods and Other Niche Products: The Impact of Food Safety and Plant Health Standards", World Bank, 2005.

In conclusion, the EU Trade Commissioner underlined the need for a continued push "for harmonization of SPS products and process requirements through the establishment of international rules." [2]

## Harmonization

The use of harmonized food safety measures between member countries of the WTO, on the basis of international standards developed by international organizations, constitutes a main goal of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).

The SPS Agreement attempts to regulate harmonization when it comes to measures applied to protect human, animal or plant life or health, stating that, "to harmonize sanitary and phytosanitary measures on as wide a basis as possible, members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist" [3].

The Agreement defines the Codex Alimentarius Commission as the body responsible for establishment of standards, guidelines and recommendations related to food safety, food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice.

Members are able to employ more stringent levels of protection, provided there is sound scientific justification and a non-discriminatory assessment of risks. But the fact of the matter is that the SPS Agreement sometimes provides for ambivalent flexibility in terms of applicable food safety measures, thus causing several compliance problems especially in the case of developing countries' agricultural exports (see box, **Standards and non-tariff barriers**).

Disparities are not limited to transactions between developed and developing countries; divergences abound even in North-North and South-South negotiations, corroborating the dire need for harmonization and homogeneous treatment of SPS measures in the international trading environment.

In a meeting held 29-30 June 2005 [4], the WTO Committee on SPS Measures reported specific examples of trade concerns that ranged from Australia's import restrictions on apples from New Zealand, the EU and the United States, to the EU's private retailers' EurepGap fruit and vegetable restrictions against least developed countries (LDC's), or also to Japan's import suspension on heat-processed straw and forage for feed due to a foot-and-mouth disease outbreak in China.

In the same meeting, China asserted that the "volume of notifications of SPS measures posed a significant problem for developing countries", in contradiction with special and differential treatment for developing countries, and in particular LDC's.

In fact, more has to be done in terms of technical assistance and capacity building in poorer countries, particularly under the Standards and Trade Development Facility (STDF) [5], a joint initiative by FAO, World Organization for Animal Health (OIE), World Bank, WHO and WTO.

## ISO 22000 – a feasible alternative?

The importance of ISO to the current debate on food safety is clear. ISO has a long-standing and productive cooperation with the Codex Alimentarius Commission with more than 300 ISO standards having

2) Speech by Peter Mandelson at the Conference on EU Exports and Sanitary and Phytosanitary Measures, Brussels, 27 May 2005.

3) WTO Agreement on the Application of Sanitary and Phytosanitary Measures, Article 3.1 (excerpt).

4) WTO Committee on Sanitary and Phytosanitary Measures, summary of the meeting held on 29-30 June 2005 (G/SPS/R/37/Rev.1), 18 August 2005.

5) See **www.standardsfacility.org**.

been adopted by Codex in such areas as food products, water quality, chemistry and conformity assessment[6].

This historically tight cooperation between ISO and Codex means that proper harmonization of food safety management systems may not be just a distant ambition, but a viable objective after all under the international trade framework.

Food safety problems may result in **very negative impacts** on the economies of poor, developing countries

Accordingly, at a July 2005 session of Codex, several governmental delegations underlined the view that ISO's activities in providing harmonized international standards for adoption as national standards are important, and that Codex should continue its cooperation with ISO in the relevant areas. The complementary character of ISO and Codex denoted the importance of an optimized coordination between the two bodies[7].

ISO 22000, published on 1 September 2005, solidifies a response to an increasingly diverse mesh of domestic food safety regulations, without sidetracking from the wider scope of the ISO 9001:2000 quality management system standard and the Hazard Analysis and Critical Control Point (HACCP) parameters adopted by Codex.

By facilitating the implementation of HACCP guidelines and harmonizing otherwise diverse national regulations, the ISO 22000 standard might be able to respond to legitimate food safety requirements while at the same time help reduce the non-tariff barriers caused by the use of illegitimate (protectionist) SPS measures.

ISO 22000 mirrors the HACCP principles and facilitates their practical implementation on a step-by-step basis (see **Table 2**), striking a homogeneous balance as a food safety standard for countries and private players alike.

With its "food chain/process-driven" approach, ISO 22000 treats food safety concerns in a holistic manner that efficiently oversees the "forest" of safety requirements, while linking individual processes to the whole system and ensuring objective measurement of results.

This means that domestic food safety management systems around the world could be subject to equivalent performance evaluations. At the same time, capacity-building efforts, instead of aiming at costly bilateral compliance initiatives, could be more easily implemented in an internationally accepted manner, even if adjustments to regional conditions are to be taken into account.

## ISO 22000 – strategic step

ISO 22000, covering HACCP principles, Codex application steps and the main requirements of private food retailers, may play a crucial role in the attainment of a basic food safety standard for producers in developed and developing countries. It thus represents a strategic step towards further harmonization of food safety demands in the global arena.

| HACCP steps | Equivalent coverage by ISO 22000 ? |
|---|---|
| Hazard Analysis | YES |
| Critical Control Point (CCP) Determination | YES |
| CCP Limits | YES |
| Monitoring of CCPs | YES |
| Corrective Action Plan | YES |
| System Verification | YES |
| Documentation | YES |

Table 2 – *Comparison of HACCP and ISO 22000.*

In other words, ISO 22000 would be able to moderate concerns related to trade barrier negotiations and streamline capacity-building efforts in developing countries. If properly adopted and implemented by countries, it would reflect universally accepted food safety requirements, demanding fewer disparate efforts by countries and producers on tight budgets.

With the potential for increased transparency and traceability measures, ISO 22000 is a useful tool to address the sensitive issue of SPS measures as discriminatory or disguised restrictions in international trade and in access to export markets.

ISO 22000 could be the main conduit for SPS trade facilitation, simplifying formalities connected with importation and exportation, and allowing developing countries to create more employment, increase domestic revenue and meet the necessary poverty reduction and millennium development goals in due course[8].

And given proper political will by member countries, official endorsement of ISO 22000 and other ISO standards by the SPS Agreement, in cooperation with ISO, national accreditation authorities and the STDF initiative, would finally enable effective WTO negotiations on the harmonization of standards.

This would ensure that the food safety interests of most countries do not conflict with the capacity-building and market access needs of poorer nations. •

6) WTO Committee on Sanitary and Phytosanitary Measures, statement by the representative of ISO at the meeting of 29-30 June 2005 (G/SPS/GEN/589), 11 July 2005. One may also mention the newly published ISO/PAS 28000 specification or supply chain security management systems as an additional apparatus to foster smooth and coordinated flows of international trade among countries.

7) Codex Alimentarius Commission, Report of the Twenty-Eighth Session on 4-9 July 2005 (Alinorm 05/28/41), Rome, 2005.

8) See, for instance, Annex E of the Draft Ministerial Text (Doha Work Programme – Preparations for the Sixth Session) of the Ministerial Conference, 2005.