INTERNATIONAL HARMONISATION OF FOOD STANDARDS FOR FOOD SECURITY

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The first session (1950) of the Joint FAO/WHO Expert Committee on Nutrition stated: "Food regulations in different countries are often conflicting and contradictory. Legislation governing preservation, nomenclature and acceptable food standards often varies widely from country to country. New legislation not based on scientific knowledge is often introduced, and little account may be taken of nutritional principles in formulating regulations".

Let us remind ourselves that the world population has grown from 3.0 billion in 1960 to 7 billion at the end of 2011 (World Bank); and it would have further grown by now. India herself produces one Australia every year. The global food consumption has also grown from 7 billion meals per day to about 18 billion meals a day. Truly, food production has also grown substantially to address the food security situation and, over these years, we have also addressed the food safety issues. Talking about India we feed at least 2 billion meals per day considering the fact that a number of citizens go without asquare meal on many occasions.

Coming to food safety, what are our expectations from the food laws in different countries..? Are countries in a position to say that setting food standards will provide safe food to all of us..? Have we made any assessment about the technical manpower required to meet and monitor the intended objectives..? Who will buy from the producers unless they are capable enough to meet the standards required by the super-markets, now that there are a growing number of consumers ready to pay an extra buck for safer food..? These questions keep coming to our mind.

If one looks at the competition among super-markets in the global food market, there is a growing urge for one-up-man-ship for that extra share of consumer attention. Few decades ago, when suppliers started meeting the quality expectations, safety became their buzzword that has continued to change dimensions with the growing competition and, quite generally, in direct proportion to technological advancement. Producers and manufacturers in the developing world have continued to remain in a state of 'constant chasing of goal posts'. The standards introduced by the super-markets and others have been taking different shapes spreading across varied forms of food safety and quality management systems at different stages of the value chain, be it farming, manufacturing, transportation or laboratory testing. Does a farmer understand their implications or does he know how to address all these transformations on an on-going basis and where to get the money from to sustain these requirements to remain in the market..?

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He is only at the receiving end. And this is true of producers in most developing countries.

Since quality and safety concerns have increased among the consumers, international trade in food has become an arena for survival of the fittestand the countries and super-markets are fast adapting themselves to thechanging needs. This has given rise to private standards and these arefast developing designed for each level of the value chain, be it the farm level, manufacturing level, transportation level, retail level, certification level or laboratory testing level. This leads to a lot of confusion in the mind of the producer. He finds himself in a position where he is required to meet several legal and private standards and certification procedures. This does not facilitate trade, and it also leads to food wastage caused on account of non-compliances or partial compliances. Indirectly, it leads to food scarcity. Thus, in order that producers in developing countries are able to market their products and wastage at different stages of marketing is avoided, it is important to harmonize standards for food quality and safety as well as 'best practices' world-wide and also promote the application of such standards among producers, manufacturers and those engaged in the supply chain. This will also ensure fair practices in the food trade, which is one of the mandates of Codex Alimentarius. It would, thus, be prudent to direct resources in this direction.

The establishment of Codex Alimentarius in the early 60's bears testimony to the wisdom of FAO and WHO to address these needs. Codex texts are adopted by consensus by its membership and, thus, are recognized as the international standards. It is, therefore, necessary for us to agree on internationally harmonised standards and also ensure that Codex remains the pre-eminent food standards setting organization. As a global inter-governmental body, the pre-eminence of Codex standards will come through greater contribution of developing countries in the Codex process. These countries comprise almost 70% of the world population and, therefore, their contribution is equally pre-eminent.Over time, effective participation of developing countries in the process of Codex standards setting has become more and more visible. This is indicative of the growing awareness of food safety among the developing countries. Codex standards and texts are based on global consensus. Thus, our collective effort should be to ensure greater acceptability of the Codex standards throughout the globe for uniform application for improved health of the people and also to enhance trade in food products. Continued co-operation of countries in the Codex process will lead to fulfillment of the expectations of Codex members and the consumers at large. This is bound to ensure greater food security.

While FAO and WHO are actively engaged in capacity building in developing countries and might need more resources to meet the ultimate goal of food security coupled with food safety, there is a need to have a strategy to promote Codex standards globally amongst traders, retailers and consumers for wider acceptability and for facilitating international trade among trading nations.

Now, a word about the business in animal products. Meat is an important source of protein for the human body. It, therefore, has an important place in the food basket for

the purposes of food security. It, however, comes under the risk zone because of the nature of the product. Therefore, its safety for human health is of paramount importance. Codex has developed several guidance texts for ensuring hygienic production. There are a number of Codex Committees that have been engaged in developing standards and guidance documents for animal based products. These are, for instance, CCFH (food hygiene), CCFFP (fish and fishery products), CCCF (food contaminants) and TFAF (animal feed) that are developing Codex texts on a regular basis. The CCMPP (meat and poultry products) and CCMMP (milk and milk products) have completed their work and are adjourned *sine die*. The work of CCMPP is now being undertaken by the CCFH. Examples of some of the Codex Standards and Codes of Practicein respect of animal based products developed over the past several years are as follows:

Codes of Hygienic Practice

- Principles and Guidelines the Conduct of Microbiological Risk Assessment as well as Risk Management
- Guidellines for the Control of Campylobacter and Salmonella in Chicken Meat.
- Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food, Pathogenic Vibrio Species in Seafood.
- Code of Hygienic Practice for Eggs and Egg Products
- Code of Hygienic Practice for the Processing of Frog Legs
- Code of Hygienic Practice for the Transport of Food in Bulk and Semi-Packed Food
- Code of Hygienic Practice for Milk and Milk Products
- Guidelines for the Preservation of Raw Milk by Use of the Lactoperoxidase System

Standards for Milk and Milk Products

- Standard for Milk Powders and Cream Powder
- Standard for Fermented Milks
- Standard for Butter, Milk fat Products, Evaporated Milks, Sweetened Condensed Milks
- Dairy Fat Spreads
- General Standard for Cheese and also for large variety of cheese
- Standard for Whey Cheeses, whey powders
- Standard for Cream and Prepared Creams
- Standard for Cheeses in Brine (Group Standard), Unripened Cheese including Fresh Cheese
- Standard for Edible Casein Products

Animal Feeding

- Code of Practice for Good Animal Feeding

Standards for Meat Products

- Standard for Luncheon Meat
- Standard for Cooked Cured Ham, Cooked Cured Pork Shoulder, Cooked Cured Chopped Meat

Standards for Fish and Fishery Products

- Standard for Canned fish, Quick Frozen Blocks of Fish Fillets, Minced Fish Flesh and Mixtures
- Standard for Quick Frozen Fish Sticks (Fish Fingers), Fish Portions and Fish Fillets - Breaded or in Batter
- Standard for Salted Fish, Dried Salted Fish and Dried Fish Fins
- Quick Frozen Fish Fillets, Quick Frozen Raw Squids, Quick Frozen Shrimps or Prawns, Quick Frozen Lobsters
- Standard for Crackers from Marine and Freshwater Fish, Crustaceans and Molluscan Shellfish
- Standard for Boiled Dried Salted Anchovies, Sturgeon Caviar, Live and Raw Bivalve Molluscs
- Standard for Canned Salmon, Tuna, Bonito, Shrimps or Prawns, Crab Meat
- Standard for Sardines and Sardine-Type Products

In addition to the above texts, Codex Alimentarius has developed several texts of horizontal nature, such as, Contaminants (CCCF), Veterinary Drugs (CCRVDF), Inspection and Certification (CCFICS), Methods of Analysis and Sampling (CCMAS) as well as Labeling (CCFL). Examples of such texts are given below:

Contaminants

- General Standard for Contaminants and Toxins in Food and Feed
- Code of Practice for the Reduction of Aflatoxin B1 in Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals
- Code of Practice for the Prevention and Reduction of Dioxin and Dioxin-like PCB Contamination in Food and Feeds

Veterinary Drugs

- Guidelines for the Design and Implementation of National Regulatory Food Safety Assurance Programmes Associated with the Use of Veterinary Drugs in Food Producing Animals
- Code of Practice to Minimize and Contain Antimicrobial Resistance
- Maximum Residue Limits for Veterinary Drugs in Food (there is a list of drugs for which MRLs have been established)

The Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS) has also developed several guidance text including Guidelines for Food Import Control Systems, Guidelines for the Exchange of Information in Food Control Emergency Situations, Guidelines for the Exchange of Information between Countries on Rejections of Imported Foods, Principles for Traceability/Product Tracing as a Tool within a Food Inspection and Certification System, etc. The Committee is, currently, working on a guidance document for countries for the development of Nation Food Control Systems.

In addition, the Codex Committee on Methods of Analysis and Sampling (CCMAS) has, amongst others, developed Recommended Methods of Analysis and Sampling, General

Guidelines on Sampling, Guidelines for the Assessment of the Competence of Testing Laboratories involved in the Import and Export Control of Foods, Harmonized Guidelines for Internal Quality Control in Analytical Chemistry Laboratories, International Harmonized Protocol for the Proficiency Testing of (Chemical) Analytical Laboratories, Harmonized IUPAC Guidelines for Single-Laboratory Validation of Methods of Analysis, Harmonised IUPAC Guidelines for the use of Recovery Information in Analytical Measurement, Guidelines on Measurement Uncertainty, Guidelines for Settling Disputes on Analytical (Test) Results.

Similarly, the Codex Committee on Food Labeling (CCFL) has developed texts on General Guidelines on Claims, Guidelines for Use of Nutrition and Health Claims, Guidelines on Nutrition Labelling, General Standard for the Labelling of and Claims for Pre-packaged Foods for Special Dietary Uses, Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, Compilation of Codex texts relevant to the labelling of foods derived from modern biotechnology, etc.

In addition to the above Codex Committees that have an application in the area of animal based products, there is a Codex Committee on Pesticide Residues (CCPR) that has not only set out MRLs for pesticide residues, it has also developed Guidelines on Good Laboratory Practices for pesticide residue analysis, Guidelines on the Use of Mass Spectrometry (MS) for Identification, Confirmation and Quantitative Determination of Residues, Guidelines on Estimation of Uncertainty of Results, Classification of Foods and Animal Feeds, etc. The work done by this Committee finds similar useful application in the area of residues of veterinary drugs.

The purpose of mentioning the names of the above standards and guidance texts is to provide information about the manner in which Codex Alimentarius has gone about developing globally harmonized standards and how these are useful on an international plane. Most of these texts are based on scientific risk assessment carried out by FAO/WHO expert groups, namely JECFA (food contaminants, veterinary drugs), JEMRA (microbiological contamination) and JMPR (pesticide residues). Each of the horizontal committees like CCFH, CCRVDF, CCCF and CCPR (except CCFICS, CCMAS and CCFL) follow the application of Risk Analysis Policy and Principles set out by them. All these texts are largely uniform and are based on the Working principles of Risk Analysis set out by the Codex Committee on General Principles (CCGP), which a policy and procedure making Committee of the Codex Alimentarius.

With regard to veterinary drugs, the Codex Alimentarius has established two procedures and these are:

(a) Risk Analysis Principles applied by the Codex Committee on Residues of Veterinary Drugs in Foods; and

(b) Risk Assessment Policy for the setting of Maximum Limits for Residues of Veterinary Drugs in Foods

Both these documents are explained in the Codex Procedural Manual and are followed scrupulously. Clear criteria have been set out for prioritizing the scientific risk assessment activity for various veterinary drugs for the

purposes of establishing their Maximum Limits in Foods. The process for taking risk management decisions has also been established. Other legitimate factors that are relevant for the health protection of consumers and fair practices in food trade can be taken into account while taking the risk management decisions. To facilitate the process of setting out Maximum Limits, it is important for the countries to generate data and provide them to JECFA for review.

The Codex texts are finalized and adopted after due consideration by the relevant expert groups and the Codex members (Codex Alimentariusis an inter-governmental body of the United Nations; 186 countries and the European Union are its members), taking into account the concerns of developing countries. India as well as the other countries need to make use of these texts to redefine policies and procedures for standards setting for food products to ensure the safety of the health of people of the globe. These will not only help in achieving the intended food safety objectives, it will also help to harmonise food standards with the international standards and best practices. Harmonisation of national standards with the Codex standards also provides the opportunity to enhance trade with the trading partners through the process of equivalence determination and recognition of conformity assessment procedures. Codex standards are taken as the reference standards within the framework of WTO and, thus, help to iron out bilateral differences in the SPS measures of countries by standardizing exchange of relevant information. In the end, this will also help in preventing food wastage and, in turn, supportbetter food security conditions.

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