

THE CODEX ALIMENTARIUS COMMISSION: INTERNATIONAL SCIENCE-BASED STANDARDS, GUIDELINES AND RECOMMENDATIONS

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This paper provides background to the Codex Alimentarius Commission, its activities, and current Codex considerations. It argues that food standards work, and the control of food quality and safety must be based on the best available scientific information to assure a constant supply of good quality and safe food to all.

Key words: Codex Alimentarius Commission; science-based standards; Food and Agriculture Organization (FAO); World Health Organization (WHO); General Agreement on Tariffs and Trade (ATT); food standards

During the 1950s and early 1960s member nations to the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO) held extensive discussions about international mechanisms to assist all member countries to improve the quality and safety of domestic food supplies, and of foods in international commerce. These discussions were based on concerns related to increasing international food trade following the Second World War. Concerns included the increased use of food additives to preserve foods, new pesticide compounds which were being used in agriculture and food storage, differing food standards in various countries affecting basic food composition and nutritional value, and basic problems such as accurate labeling, promoting good food hygiene to reduce or eliminate contamination of foods with insects, rodent and bird filth, and pathogenic microorganisms.

Origins And Antecedents Of The Codex Alimentarius Commission

Much of the agenda of FAO and WHO related to food standards, food quality, and safety was laid down in a landmark conference organized at Hot Springs, Virginia in May-June 1943 (United Nations Food and Agriculture Organization [FAO], 1943). The 1943 Conference was convened by President Franklin D. Roosevelt to address problems of food and agriculture that had been greatly exacerbated by the war, and were likely to continue after the end of the war. The Final Act of this Conference (FAO, 1943) pointed out the need for more food and better economic access to it to prevent widespread problems of malnutrition which existed then, and which continue to exist in many countries today. It made wide ranging recommendations, among other things, on nutrition and standards for the basic composition of foods, and for containers, additives, pesticides, fertilizers and other materials used in food production. It also urged governments to take steps to “ensure that producers and consumers are adequately protected against trade malpractices and against exploitation in the purchase and sale of food.” (p. 37).

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The 1943 Conference created an Interim Commission to carry out conference recommendations, and this led on October 16, 1945 to the creation of the Food and Agriculture Organization of the United Nations. The FAO, in fact, preceded the creation of the United Nations General Assembly by one month, and the World Health Organization by several years. In their early years, FAO and WHO concentrated on general problems of food production and malnutrition, but in the 1950s initiated joint FAO/WHO discussions and activities on food standards, additives, and other aspects of food quality and safety. These discussions by FAO and WHO member countries emphasized the need for international scientific evaluation mechanisms that could provide the best possible science-based advice to member countries, with periodic updating to assure that new scientific information was always taken into account in FAO/WHO recommendations.

Following an FAO/WHO Conference of Food Additives in the mid-1950s the Joint FAO/WHO Expert Committee of Food Additives (JECFA) was established (FAO, 1957). The purpose of JECFA was to utilize the services of internationally recognized scientists serving in their individual capacities in expert meetings to evaluate available data on food additives, animal drug residues in foods, and other food contaminants such as, mycotoxins, heavy metals, and industrial chemicals. The recommendations of JECFA on specifications and test methods for these compounds, acceptable daily intakes for additives or animal drug residues, and tolerable weekly intakes for contaminants, have for many years been of great value to developed and developing countries in setting science-based national rules for such compounds. The work of JECFA has continued unabated over the past 45 years, and continues to be a mainstay to member countries and to the Codex Alimentarius Commission (Codex).

In the 1960s, FAO and WHO carried out similar discussions about the use of pesticides in agriculture and health programs, and on pesticide residues in foods. Another expert assessment body was created; the Joint FAO/WHO Meeting on Pesticide Residues (JMPR), which is a joint meeting of the FAO Panel of Experts on Pesticide Residues in Foods and the Environment and the WHO Core Assessment Group. As with JECFA, the recommendations of JMPR on the use of pesticides in agriculture and public health programs; on residues in foods; specification and test methods for pesticides and their residues; and for acceptable daily intake levels for various pesticides, have been invaluable to member countries, and to Codex, in setting science-based recommendations for pesticide residues in foods.

The FAO/WHO Codex Alimentarius Commission

In 1962, FAO and WHO decided at the FAO Conference¹ and the WHO World Health Assembly to create the Joint FAO/WHO Food Standards Programme Secretariat to serve as the Secretariat to the newly created FAO/WHO Codex Alimentarius Commission (Codex). Unlike JECFA and JMPR, which were bodies of individual experts serving in their own individual capacity to provide FAO, WHO, and their member countries with recommendations based on current scientific data, Codex was created as an international commission. This means that members of Codex are governments, and participate in Codex activities representing their own national interests.

The Statutes of Codex set the purposes of Codex as follows,

- To protect the health of consumers and ensure fair practice in food trade.
- To promote coordination of all food standards work undertaken by international governmental and non-governmental organizations (NGOs).
- To prioritize, initiate, and prepare draft standards, finalize these standards, amend standards when necessary, and publish final recommended international standards.

In practice, over the past 40 years Codex has served as a very effective mechanism for obtaining consensus among Codex member countries on a wide range of food standards for individual food products, food labeling, recommendations on pesticide residue food additive and food contaminant

levels, codes of hygienic practice, and other recommendations. Membership of Codex has grown from about 45 countries in 1962 to 165 countries at present. In carrying out Codex work, the Commission has established a number of committees to work on general and specific aspects of Codex work. These committees are generally referred to as “vertical” committees when they are set up to deal with commodity standards (milk and milk products, processed fruits and vegetables, cereals, pulses and legumes, and so on) or “horizontal” committees which deal with matters such as food labeling, food hygiene, pesticide residues, food additives and contaminants, Codex general principles, and so on. There are also Codex Regional Coordinating Committees that discuss regional food standards issues, and work towards more effective utilization of Codex work in developing and developed countries.

A guiding principle for Codex since its establishment has been to base its work on the best possible scientific advice. For this reason, the work carried out by JECFA, JMPR, and ad hoc FAO/WHO expert consultations have been invaluable inputs into Codex discussions. Without adequate science-based inputs into Codex work it would be difficult, if not impossible, to reach consensus on many Codex issues. The FAO and WHO have organized several international conferences of member countries to review Codex and related work from time to time. The most recent of these conferences was held in Melbourne, Australia in October 1999 (FAO, 1999), and reviewed and endorsed ongoing science-based Codex, JECFA, and JMPR work. It also strongly supported Codex work with the WTO to provide all member countries, especially developing countries, with equal opportunities to compete in international trade of good quality and safe foods. Most developing countries rely on the agricultural industry for overall development. Codex work provides a basis for national regulations that improve the quality and safety of domestic and imported foods, and promotes export trade possibilities. At present many developing countries have problems in international trade because of poor food hygiene, pesticide residues in export crops, microbial contamination, and food labeling. Codex work helps to resolve some of these problems, especially when FAO or other technical assistance is given to strengthen government and industry food control activities. There are a wide range of FAO food control guidance documents and expert reports which are used by all countries in setting up improved food control systems. These can be found on the FAO website (FAO, 2001).

Codex member countries have understood from the outset that effective implementation of food legislation requires science-based systems to assure the best consumer protection and to enable clear justification of actions taken to courts, policy makers, and to consumers. It is clear that all matters related to the control of quality or safety of foods, such as net weight, volume, ingredient lists, claims, additives, pesticide or animal drug residues, control of contaminants or food hygiene, must be based on good science.

A recent problem that has arisen in Codex work relates to new foods and food ingredients derived from new techniques such as cloning and genetic engineering. National and international evaluation of genetically modified foods, have shown that they are not significantly different from other more “traditional” foods. Despite the reassurance from the United States Food and Drug Administration (US FDA) and other national or international bodies, such as FAO/WHO expert consultations, that genetically modified foods are safe, and present no more problems to consumers than other foods on the market, pressure continues from some groups to require specific labeling of genetically modified foods and ingredients. Based on the best available science this is not justified. Codex discussions are continuing on this point but no consensus has been achieved.

The General Agreement On Tariffs And Trade (GATT) And The World Trade Organization (WTO)

In 1947, the United Nations member countries established GATT to carry out harmonization of tariffs and promote better international trade in all products. At the outset agriculture and food were not included in GATT activities, but Codex food standards were recognized in the 1970s when GATT produced a non-binding text on non-tariff barriers to trade. In 1986, GATT member countries decided to

start a new round of trade negotiations that would include for the first time agriculture, and agricultural products. These discussions were called the Uruguay Round of Multilateral Trade Negotiations and were concluded in mid-1994.

The Uruguay Round decisions included the creation of the World Trade Organization (WTO) from January 1, 1995 (World Trade Organization [WTO], 1994). Also included were agreements on agriculture designed to reduce and harmonize income support levels, agreements on sanitary and phytosanitary measures (SPS) designed to harmonize or promote equivalence in food standards, and agreements on technical barriers to trade (TBT). The overall objective was to preclude national standards measures from preventing free and fair access of foods and other products to markets of other countries. The SPS agreement specifically recognizes the work of Codex as providing benchmark standards, recommendations, and guidelines in judging foods in international trade. Similarly, the TBT agreement recognizes all international standards work, such as Codex, as authoritative in examining technical barriers to trade issues involving food standards.

The WTO has been authorized to examine trade complaints from its member countries and using a tribunal system, to make binding decisions about such complaints. One of the first complaints to come before WTO involved the ban of beef imports by the European Union (EU) if the beef came from cattle that had been produced using growth promotion hormones. Prior to the creation of WTO, JECFA had on several occasions reviewed growth promotion hormones and the safety of residues in meat, and had set acceptable daily intake levels for these products. The Codex Committee on Veterinary Drug Residues in Food had reviewed JECFA recommendations and other relevant information and recommended residue limits for these hormone substances to the Codex Commission. Despite strong opposition by EU member countries, the Codex Commission formally approved the recommended residue limits, leading to the eventual WTO complaint.

The WTO examination of the United States (US) complaint stated that the EU ban was too restrictive and was not based on sound scientific evidence. The WTO tribunal examined the relevant JECFA and Codex decisions, and ruled against the EU, stating that its ban was not based on adequate scientific information. The EU is still appealing this decision and has maintained its ban, invoking among other things the “precautionary principle,” consumer demands, and other non-science based factors.

It is possible that current subsidies to EU farmers are an important factor in Europe’s stance on this. At present, support payments from the EU and the French government represent about 80% of the overall income for French farmers raising large animals. Given the political influence of farm groups in all countries, and the lower prices of meat imports into the EU, if allowed, understanding the EU ban is easier. The WTO Agreement on Agriculture is attempting to reduce or eliminate some of these non-science based barriers to trade.

Another aspect of promoting science-based Codex work and reflecting this work in national legislation is the promotion of better communication between all concerned. At present, government food control authorities have the responsibility to review scientific information from industry sponsors of new GMO food, food additives, pesticides, food claims, and so on. The food control authorities also have the responsibility of inspecting food producers, processors, and distributors to assure adequate consumer protection from all food quality and safety problems covered in appropriate legislation. The food industry, from producers through retail establishments in general, tries its best to comply with food laws and regulations.

Despite government and food industry efforts, in many countries consumers have doubts about the quality and safety of the foods they buy and consume. The Codex Alimentarius Commission and WTO have concentrated on improving risk analysis procedures, including basic risk assessment as carried out by JECFA, JMPR, and their national government counterparts; risk management of food problems through appropriate government regulatory, inspection, and analysis systems; industry quality and safety management procedures; and improved risk communication information. In the latter area, scientists from government, industry, and academia have considerable room for improvement in preparing and

presenting science based information about food quality and safety in an understandable manner if consumers and policy makers are to accept assurances that food supplies are of good quality and safe.

Concluding Comments

This paper has discussed the background to the Codex Alimentarius Commission, its activities, and current Codex considerations. It has argued that food standards work, and the control of food quality and safety must be based on the best available scientific information and judgment to assure a constant supply of good quality and safe food to all.

Endnote

¹The biennial meeting of the FAO governing body is called the FAO Conference.

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