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Ivica Kelam

Faculty of Education/Centre for Integrative Bioethics,
Josip Juraj Strossmayer University of Osijek, Croatia

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The Codex Alimentarius Commission (Codex) is the main international body responsible for adopting food safety rules. A particular problem is the issue of genetically-modified food since this topic has been in the public attention from the first instances of sowing genetically-modified crops in the mid-1990s. Because of the importance of the recommendations in the Codex, corporations are particularly interested in adopting the recommendations which cannot affect their profits – this is particularly evident in their effort to prevent the mandatory labelling of genetically-modified foods. In this chapter, through a brief historical overview of the process of labelling genetically-modified food, we will point to the complexity of this issue, which is manifested within a twenty-year process of issuing rules on labelling genetically-modified food.

Keywords

Codex Alimentarius Commission; genetically-modified food; labelling; bioethics; corporations.

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The Codex Alimentarius Commission (Codex) is the main international body responsible for adopting food safety rules. A particular problem is the issue of genetically-modified food since this topic has been in the public attention from the first instances of sowing genetically-modified crops in the mid-1990s. Because of the importance of the recommendations in the Codex, corporations are particularly interested in adopting the recommendations which cannot affect their profits – this is particularly evident in their effort to prevent the mandatory labelling of genetically-modified foods. In this chapter, through a brief historical overview of the process of labelling genetically-modified food, we will point to the complexity of this issue, which is manifested within a twenty-year process of issuing rules on labelling genetically-modified food.

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I. Introduction

The exponential increase in food safety incidents across the globe in the past decades has resulted in mushrooming regulatory initiatives, including new standards and requirements from national governments, international organizations, and private actors. Such regulatory initiatives, both public and private, have primarily emerged to address

the rapidly decaying public trust in modern global food chains. This is further complicated by several factors including the globalization of economic activities, advancements in food science and transportation technology, the multinationalization of the food industry, and the advent of the World Trade Organization (WTO) in 1995. Given the significantly transformed production, transportation, and consumption of food [1], recent food safety incidents, with their intensified scope, severity, frequency, and impacts have become extremely challenging to cope with. A World Health Organization (WHO) report indicates that food safety problems contribute to 1.5 billion cases of diarrhoea in children and over three million premature deaths annually, both in developed and developing countries [2]. For example, yearly, approximately 125 000 children die in developing countries due to foodborne diseases caused by contaminated food and water [3]. The United States Centers for Disease Control and Prevention (CDC) estimates that 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths result from foodborne diseases each year in the United States [4]. Despite the unprecedented numbers of food safety incidents, no multilateral treaty exists to monitor or regulate global food safety, other than the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) [5], which lightly touches upon the side issues of harmonization and scientification from an international-trade-law (facilitation of food trade) perspective. In addition, as contaminated food outbreaks do not stay within national boundaries, unilateral measures adopted by national governments, even with a certain level of extraterritorial effects, fail to provide an effective or efficient approach to addressing the global food safety problem.

II. History of the Codex Alimentarius Commission

The origins of the Codex can be traced back to the beginning of the 20th Century. In 1911, Austria recognized the private notes of experts on the evaluation of food items as the “Codex Alimentarius Austriacus” [6] (p. 19). “Codex Alimentarius” is a Latin term meaning “Food Code,” and the current Codex derived its name from a title of the food standards adopted by the Austro-Hungarian Empire [7]. In 1958, The European Codex Commission was set up to effectively promote international co-operation in setting a common “Food Code.” The European Codex Commission promoted the idea that the

objective of achieving an international food code should be taken under the auspices of the United Nations [8] (p. 43). In 1959, several Latin American countries also created their own Code, the Código Latino-Americano de Alimentos [9]. In overcoming the fragmentation of this system and better addressing the challenges of international trade, the FAO and WHO launched the joint FAO/WHO food standards programme, in 1962 in Geneva [10] (p. 12-13). One year later, the Codex was born as a subsidiary body of FAO and WHO, with the mandate of implementing the programme. The Codex was also subsumed and continued the work of the Codex Europaeus. Currently, the Codex has 189 Codex Members comprised of 188 Member Countries and one Member Organization (The European Union) [11], as well as 226 Codex Observers: 56 international organizations, 154 non-governmental organizations, and 16 UN organizations [12]. The member states of the Codex represent 99% of the world's population. The Codex is a multilayered international body, composed by a multitude of committees dealing with both horizontal and vertical issues: next to an Executive Committee, there are 6 active commodity committees (e.g. Codex Committee on Fresh Fruits and Vegetables, and Codex Committee on Spices and Culinary Herbs) and 10 active General subject committees (e.g. Codex Committee on Contaminants in Foods, Codex Committee on Food Labelling, and the Codex Committee on Food Hygiene) [13]. Each committee is administered, organized, and financed by a Codex Member (a 'host country'); these are most commonly countries that have a specific interest in a certain Codex issue, who then become the host of that specific committee (e.g. Canada is the host country for the Codex Committee on Food Labelling). The scientific meta-analysis used in Codex decision-making processes are produced by one of the several expert committees, which have been jointly established by the WHO and FAO and provide the studies that are further used to adopt standards. The decision-making process of the Codex consists of an eight-step procedure, starting with the proposal of a standard by a Committee or a Member, followed by several evaluations and discussions (step 2 to 7) and ending with the submission of the standards for adoption by the Codex [14] (p. 31). On step 2, a draft text and an assessment by an expert body (e.g. JECFA) are prepared, followed by recommendations of Acceptable Daily Intakes (ADIs) and/or the preparation of Maximum Residue Levels

(MRLs). This is arguably one of the most important phases of the decision-making process because expert recommendations are typically endorsed in the final standards. According to Article 1 of the Statutes of the Codex, the purpose of the Codex is as follows:

The Codex Alimentarius Commission shall, subject to Article 5 below, be responsible for making proposals to, and shall be consulted by, the Directors-General of the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) on all matters pertaining to the implementation of the Joint FAO/WHO Food Standards Programme, the purpose of which is:

- (a) protecting the health of the consumers and ensuring fair practices in the food trade;
- (b) promoting coordination of all food standards work undertaken by international governmental and non-governmental organizations;
- (c) determining priorities and initiating and guiding the preparation of draft standards through and with the aid of appropriate organizations;
- (d) finalizing standards elaborated under (c) above and, after acceptance by governments, publishing them in a Codex Alimentarius either as regional or worldwide standards, together with international standards already finalized by other bodies under (b) above, wherever this is practicable;
- (e) amending published standards, after an appropriate survey in the light of developments [15].

The purpose of the Codex is to provide international standards to ensure the health and safety of consumers worldwide and to guide member countries in adopting harmonious food standards and thereby promote international food trade. This purpose is also reiterated on the Codex website as follows:

Codex Alimentarius follows the principle that consumers have a right to expect their food to be safe, of good quality and suitable for consumption. In this regard, the safety and essential quality of internationally traded food is of paramount importance. Codex has set a number of

standards and codes on foods for vulnerable groups such as infants and young children, to provide adequate nutrition while protecting them from foodborne risks and to reduce infant mortality and morbidity worldwide. Codex also aims at protecting consumers against deceptive practices. Codex work in food labelling contributes to providing consumers with accurate and useful information to guide their choice of food. Codex assists in the harmonisation of national food legislation and regulation of countries which want to use Codex texts as a benchmark. International harmonisation of standards facilitates food trade and sustainable economic development. Codex plays an important role particularly for developing countries that may lack the necessary infrastructure and expertise to put in place adequate standards, food safety controls, and management systems [15].

Although the adoption of the Codex texts is voluntary, many countries choose to adopt these guidelines because policy makers see the benefits for consumers and international food trade. By providing a harmonious standard that could be adopted worldwide, Codex texts serve a dual purpose of protecting consumer welfare whilst promoting international food trade. Codex texts are based on scientific principles; hence, countries that do not have sufficient infrastructure and expertise consider Codex texts as valid standards of food safety and control over international food trade.

The guidelines/standards established by the Codex are of a recommendatory nature and are not a substitute for national legislation. Countries may adopt these guidelines in their national legislation and make provisions suitable to their specific requirements. This is reiterated in the General Principles of the Codex Alimentarius as follows: “Codex standards and related texts are not a substitute for or an alternative to national legislation. Every country’s laws and administrative procedures contain provisions with which it is essential to comply. Codex standards and related texts contain requirements for food aimed at ensuring for the consumer a safe, wholesome food product free from adulteration, correctly labelled and presented [...]” [17].

After establishing the WTO, according to some authors, the voluntary nature of the standards and the small size of meetings to reach agreements were radically changed. The principal legal framework that has enabled this transformation is the WTO Sanitary and Phytosanitary Agreement (SPS Agreement), which provides that Members shall either base their measures on international standards or on science and risk assessments. Article 3.1 and the 3.2 SPS Agreement provide that

to harmonize sanitary and phytosanitary measures [...] Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist; and that (2) Sanitary or phytosanitary measures which conform to international standards, guidelines or recommendations shall be [...] presumed to be consistent with the relevant provisions of this Agreement and of GATT 1994 [18].

It is clear that conformity with Codex standards implies almost invariable conformity with WTO law since the Codex is listed among the international standardization bodies. According to Van den Bossche under the WTO rules, disputes and the adoption of rulings are quasi-automatic. In case of non-compliance, complaining Members are authorized to retaliate (suspension of concessions) [19]. The WTO enforcement system is accordingly one of the most powerful in the international legal arena. For this reason, according to Veggeled and Borgen, after the establishment of the WTO, the nature of the Codex standards has been characterized as quasi-binding [20]. By virtue of the Technical Barriers to Trade Agreement (TBT Agreement), the Codex is also relevant for technical barriers to trade, such as labelling. While this Agreement does not explicitly refer to Codex, it does refer to international standards as a benchmark for legality of regulatory measures that may adversely impact trade, and it is highly likely that Codex standards qualify as international standards.

As of today, virtually no measures disputed at the WTO and diverging from Codex standards have been found to be WTO compatible, which may be indicative of the new role played by the post-SPS Codex standards. The words of a European Commission representative, commenting on the new regime, well capture this

transition: “In the past, if we disagreed with Codex Standards [...] we could ignore and take our own legislation. Now we can’t” [20] (p. 675). The reason for this is explained by Ching-Fu Lin when he says,

the Codex, despite being an international organization jointly established by the WHO and FAO, often becomes an extended WTO battlefield of public health versus international trade. Therefore, the Codex has gone far beyond its original purpose as a mere scientific reference point, and become the most controversial “lawmaker” in the international food safety regulation arena. Moreover, as the controversies over beef growth hormones, genetically modified organisms (GMOs), and ractopamine demonstrate, the Codex has become politicized [21] (p. 21).

In the opinion of Elizabeth Smythe, the politicization of the Codex is particularly evident in the case of genetically modified foods, as exporting countries and food importing countries play a key role in the development of Codex standards [22] (p. 99-102). There is another problem that contributes to the Codex politicization. Since the Codex is a highly technical, it needs a specialized scientific body in charge of collecting and processing, specific knowledge that needs to be conducted in a large number of tests, researches, and analysis. An increasing problem is the lack of appropriate funding and technical capacity to assess various health risks. According to Huller and Maier,

the FAO/WHO experts’ committees perform these tasks by reviewing the evidence contained in existing studies, mainly conducted by the food manufacturers’ scientists, rather than by conducting first-hand empirical studies of their own. The advice to the Codex which results from risk assessment frequently comes in the form of specific maximum residue levels (MRLs)— i.e., values for the amount of a given substance that can safely be consumed with the food in which it is contained. Alternatively, the conclusion that such values need not be specified because the substance in question is safe (if used according to standard agricultural or industrial practice) can also be a result of the risk assessment [23] (p. 284-285).

In a crucial evaluation of the Codex's work in 2002, a major problem was highlighted:

the work of expert groups is the least open and transparent part of the international policy-making process, reflecting certain old-fashioned attitudes about how science should be applied to policy. Most expert body meetings are closed to the public. Reports by the expert bodies that support Codex committees are often not available for months or years while recommendations (concerning standards) might be issued promptly, the basis for those positions might not be public for a long time. This lack of transparency has led to public distrust of certain conclusions by expert bodies on controversial topics [24] (p. 7).

Thus it is not always clear what is actually independent knowledge, i.e. knowledge without a hidden agenda.

Corporate employees try to improve their authority and legitimacy over controversial issues regarding food safety or other health issues through the creation of what Buse and Lee called “Institutionalised, non-profit, industry-established and -funded, scientific networks with an interest in health issues” [25]. This is evident in the International Life Sciences Institute (ILSI), a non-profit international organization, claiming that their mission is

to provide science that improves human health and well-being and safeguards the environment. All ILSI scientific activities have a primary public purpose and benefit. Scientists from geographically diverse regions of the world can best address complex science and health issues by sharing their unique skills, insights, and perspectives. ILSI believes scientists from industry, government, and academia and other sectors of society can *and should* work together to identify and address topics of common interest [26].

However, according to Susan Sell, this organization was founded by various companies in the food industry, including Coca-Cola and Pepsi Cola, and has had a long-standing relationship with the tobacco industry that only came to light after protracted legal proceedings [27]. ILSI has strong links to the FAO and is very active in lobbying the

Codex, particularly in the food labelling committee. According to its own acknowledgment, the ILSI Biotechnological Food Board aims

to support the development and harmonisation of science based regulations around the world for biotechnology-derived food products and to disseminate science-based information regarding the safety assessment of these products to governments, industry, academia, and other interested groups around the world [28].

ILSI strongly opposes the mandatory labelling of genetically modified food, which is unsurprising especially if we see that the organization's Board of Members consists of one representative from each member company, most of which are global firms with a significant footprint in agrifood, food additive, and food chemical markets like Cargill, Monsanto, Mars, Coca-Cola, Nestle, PepsiCo, and Unilever [29]. Discussing ILSI's mission in the face of increasing food regulation in the late 1980s, Alex Malaspina from Coca-Cola declared that "ILSI is prepared to meet new challenges by continuing to generate scientific data to resolve pending issues, providing relevant scientific data to state agencies, and working to harmonize food regulations and facilitate international trade" [30]. ILSI enjoys close relationships with regulatory bodies including the Joint WHO/FAO Expert Committee on Food Additives [31] and the European Food Safety Authority [32], which rely on the substantial resources controlled by the ILSI. The organization not only influences Codex standards through direct cooperation with national and international regulators but also indirectly through the networks it develops.

Despite the accusations made by critics of secrecy and non-transparency, the Codex is, contrasting with other international organizations such as the WTO, more open to representing the various interests of all bodies involved in food production, from producers, processors to consumer rights associations. This relative openness has strengthened corporate influence in the food safety decision-making process of the Codex. According to the Codex Principles Concerning the Participation of International Non-governmental Organizations (INGOs) elaborated in 1999, any organization with an international structure and scope of activity (in three or more countries) can be accorded status and can participate as observer, receive all documents, and speak at the discretion of the chair (normally after interested

country delegations have occurred). In addition, many national delegations include representatives of various NGOs or industry and corporate associations in their delegations for full commission and committee meetings. As many critics point out, large corporate agribusiness have a vested interest in uniform standards and global market access, reflected in their participation in the Codex work, and they have identified Codex as a critical target to influence, either through lobbying the body itself or by having their interests represented by government delegations. The official governmental delegations sent to the Codex meetings include many industry representatives – 40% of the delegates in the case of the USA, for instance. In a report to the president of the European Commission in 1999, one observer of the Codex committee meetings discussing standards on the cattle growth hormone rbST stated that “the ways and means by which rbST was re-evaluated last year strengthens our belief that powerful politico-economic interests and multinational companies exercise improper influence and control in the work of Codex Alimentarius and its scientific committees whose supposed primary task is to protect human health” [33] (p. 212).

A report by National Food Alliance indicates that of the total of 2,578 participants on the various Codex committees, over 660 represented industry [34] (p. 32). The commission in 1993 included 105 national delegations, while 140 corporations were also represented. This trend has continued. The meetings of the different Codex Committees in 2000 and 2002 included about 150 of these NGOs, of these about 70 percent represented industry [35] (p. 159-174). By 2018, the number of NGOs had reached 154 [36]. The number of observers has, in fact, increased more rapidly than state membership [23] (pp. 277).

III. Codex Committee on food labelling

The Codex Committee on Food Labeling (CCFL) is the key body in the process of adopting international food labelling standards, with Canada as its host country. According to the long-time chairman Anna MacKenzie, the CCFL

examines international food labeling issues; drafts labeling provisions that are applicable to all foods; and endorses labeling provisions prepared by Codex Committees charged

with drafting standards, codes of practice, and guidelines. The high controversy generated by many issues before the CCFL demonstrates the importance given by member countries to the development of international labeling standards [37] (p. 204).

The Codex agreed on the need to address the issues of biotechnology and GM foods in 1991, and the CCFL agreed that work on labelling aspects of biotechnology should begin. It should be noted that this happened before the commencement of commercial sowing of genetically modified crops in 1996. In April 1993, the United States, as the leading country in the industry, was asked to prepare a discussion paper which was initially discussed in the October 1994 session. Debate centred around whether labelling should be required only when there were health and safety concerns, and whether labelling should be required if the foods in question did not differ substantively from traditional equivalents. However, for many country delegates, including those of the EU, the issues were premature since they were still reviewing and developing domestic regulations. Consumer groups – in this case, Consumers International (CI) – favoured a system of comprehensive labelling based on the consumers’ “right to know.” Others also argued in favour of labelling that indicated how food was produced in order to permit consumers to make choices based on values other than just those of health and safety [22] (pp. 103). Others have used this argument to mandatorily label genetically modified food, enabling consumers to make informed decisions, not only on the basis of health and safety issues but inclusive of other values such as ethical or religious ones. Due to the lack of a clear consensus among member states, the issue of labelling genetically modified foods has returned to the CCFL for redrafting. The issue was a constant source of conflict for nearly 20 years between the producers of genetically modified crops, led by the US, Canada and Argentina and the opposite bloc led by the EU and developing countries which were seeking mandatory labelling. The final agreement was reached on the 39th session of the CCFL, held in Quebec City from 9 to 13 May 2011, and was attended by delegates from 60 countries [38]. After almost twenty years of discussions on genetically modified food labelling, the CCFL finalized a document composed of various food labelling texts applied to genetically modified foods. Although the discussion of the document itself was

also a disputed and long-lasting one, the CCFL members eventually agreed on the text. It is interesting to note that in the 39th session, the title of the proposed document was changed to *Proposed Draft Compilation of Codex Texts Relevant to Labelling of Foods Derived from Modern Biotechnology* [38]. The Committee agreed with the proposal of the facilitated session in that the purpose should read as follows: “The purpose of this document is only to recall and assemble in a single document some important elements of guidance from Codex texts, which are relevant to labelling of foods derived from modern biotechnology” [38]. The document listed the following relevant circumstances:

Different approaches regarding labelling of foods derived from modern biotechnology are used. Any approach implemented by Codex members should be consistent with already adopted Codex provisions. This document is not intended to suggest or imply that foods derived from modern biotechnology are necessarily different from other foods simply due to their method of production” [38]. At its meeting in Geneva, from the 4th to 9th July 2011, the Codex adopted the proposed text of the CCFL. In the days and weeks following this move, a number of press releases and articles were written describing the importance of the labeling guidance. One article described the outcome as “Codex has capitulated on the GM labeling issue after a battle spanning approximately 20 years, stating that it will allow countries to label GMOs and the WTO will not legally challenge them for it [39].

Consumer groups and the biotech industry are issuing different interpretations of a new Codex agreement on biotech labelling. Consumers International, in a press release, highlights that,

the new Codex agreement means that any country wishing to adopt GM food labeling will no longer face the threat of a legal challenge from the World Trade Organization (WTO). This is because national measures based on Codex guidance or standards cannot be challenged as a barrier to trade [40].

However, a July 5th, 2011 article in *The Hagstrom Report* noted a disagreement among organizations as to the meaning of the new guidance. The report quoted the spokesperson of a Biotechnology Industry Organization stating that

the agreement is totally consistent with the U.S. position, which we support since it says no new guidelines are needed, because the guidelines for other foods apply to biotech foods as well. The agreement is just a compilation of existing texts with a consideration statement that says foods derived from biotech are no different from other foods based on method of productions. It also encourages companies to be consistent with Codex guidelines [41].

IV. Conclusion

That these guidelines on labelling genetically modified foods are a compromise made to satisfy both sides, opponents, and supporters of genetically modified food. It should be noted that the GM labelling guidance document was adopted after 20 years from the moment when the Codex was inquired about how to handle the food produced by modern biotechnology. Although GM labelling guidance did not recommend mandatory labelling of genetically modified food, there was no ban on labelling. Nevertheless, it should be noted that Codex's labelling guidelines are a step forward in recognizing the rights of the countries which require mandatory labelling, and these guidelines nonetheless respected the right of consumers to understand what decisions they were making in terms of eating. It should be further highlighted that the application of these guidelines is left to the decision of the member states, which have an autonomous right to introduce mandatory labelling without fear of lawsuits. As for the Codex, we can conclude that it is not a sinister mysterious society, but the international body that aims to enable the development and promotion of standards that guarantee food safety. A special risk for the Codex lies in the overwhelming power and lobbying of corporations, which, although formally have no right to vote, act as observers and have increasing influence on the decision-making process of the Codex, as evidenced by the case of adopting guidelines for the labelling of genetically modified foods. Corporations used the transparency and openness of

the Codex to covertly promote its only goal: profit. From a bioethical point of view, the work of the Codex on issues of labelling genetically modified food is especially interesting since the issue of genetically modified food is extremely controversial in the public since the very beginnings of sowing genetically modified crops.

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