



Report of the United States Delegate to the 9th Session of the Codex Committee on Contaminants in Food

March 16-20, 2015
New Delhi, India

The 9th Session of the Codex Committee on Contaminants in Food (CCCF) met March 16-20, 2015, in New Delhi, India. Participants included 55 Member countries, 1 Member organization (the European Union), and 13 international observer organizations.

The U.S. Delegation was led by Dr. Nega Beru (Delegate) from the Food and Drug Administration, Center for Food Safety and Applied Nutrition, and Dr. Kerry Dearfield (Alternate Delegate) from the U.S. Department of Agriculture, Food Safety and Inspection Service, assisted by four government and four non-government advisors.

CCCF dealt with a lengthy and complex agenda, and overall the United States was satisfied that the session was productive and in line with U.S. objectives.

Summary/Highlights

At this session, CCCF:

- recommended a number of maximum levels (MLs) for lead in foods, including foods commonly consumed by children, for final adoption by the Codex Alimentarius Commission at its 38th session (CAC 38, July 2015), and agreed to continue work led by the United States on MLs for lead in other foods;
- forwarded proposed MLs for deoxynivalenol (DON) for cereal-based foods (on a dry matter basis) for infants and children, and cereal grains (wheat, maize and barley) intended for further processing, for final adoption by CAC 38;
- **returned** proposed draft MLs for cadmium in chocolate and cocoa-derived products to an electronic working group (eWG) led by Ecuador with Brazil and Ghana as co-chairs, for further comment and consideration;
- forwarded the proposed draft ML for inorganic arsenic in husked rice to the CAC 38 for adoption at Step 5 (subject to further consideration in the Committee);
- returned the Draft code of practice for the prevention and reduction of arsenic contamination in rice for further development, comments, and consideration at its next session;
- agreed to re-establish the eWG, led by Japan and co-chaired by New Zealand, to prepare a discussion paper on methylmercury in fish, including a project document for consideration by the next session;
- agreed to re-establish the eWG, led by India and co-chaired by Indonesia and the European Union (EU), to prepare a new discussion paper on mycotoxin contamination in spices and a project document for establishment of MLs for spices;

- agreed to re-establish the eWG, chaired by India and co-chaired by the Netherlands, to prepare a revised proposed draft code of practice for the prevention and reduction of mycotoxin contamination in spices for circulation for comment and consideration at its next session;
- endorsed nine chemical contaminants and naturally occurring toxicants for evaluation by the Joint Expert Committee on Food Additives (JECFA);
- suspended work on a proposed draft ML and sampling plan for total aflatoxins in ready-to-eat (RTE) peanuts pending JECFA evaluation;
- suspended work on the discussion paper on radionuclides pending the outcome of an ongoing review by the International Commission on Radiological Protection (ICRP). The following paragraphs discuss the deliberations of the Committee in more detail. The full official report of the session is available on the Codex Alimentarius website at <http://www.codexalimentarius.org/meetings-reports/en/>.

Draft and Proposed Draft Revision of the Maximum Levels for Lead in Selected Commodities in the General Standard for Contaminants and Toxins in Food and Feed

The United States chaired the eWG to review MLs for lead in the following commodities: fruit juices and nectars (excluding juices from berries and other small fruits), ready to drink; canned fruits (excluding berries and other small fruits); canned vegetables (excluding canned brassica, leafy and legume vegetables); berries and other small fruits; legume vegetables; brassica vegetables; fruiting vegetables, cucurbits; and fruiting vegetables, other than cucurbits.

The Committee agreed to forward draft MLs for lead to CAC 38(July 2015) for final adoption at Step 8, as follows:

- fruit juices and nectars (excluding juices exclusively from berries and other small fruits and passion fruit), ready to drink at 0.03 mg/kg;
- canned fruits (excluding berries and other small fruits) at 0.1 mg/kg; and
- canned vegetables (excluding canned brassica, leafy, and legume vegetables) at 0.1 mg/kg.
- The Committee agreed to forward the following MLs for lead for final adoption at Step 5/8:
 - berries and other small fruits (excluding cranberry, currant, and elderberry) at 0.1 mg/kg;
 - cranberries, currant, and elderberry at 0.2 mg/kg; brassica and legume vegetables at 0.1 mg/kg; fruiting vegetables, cucurbits and fruiting vegetables, other than cucurbits (excluding fungi and mushrooms) at 0.05 mg/kg.
 - The Committee agreed to propose revocation of the current ML of 1 mg/kg for the following canned products: grapefruit, mandarin oranges, mangoes, pineapples, fruit



cocktail, fruit tropical salad, asparagus, carrots, mature process peas, mushrooms, palmito (palm hearts), and sweet corn.

The United States will continue to lead the eWG which will review MLs for lead in fruits and vegetables for the following commodities: passion fruit juice; juices and nectars from berries and other small fruits; canned berries and other small fruits; jams (fruit preserves) and jellies; mango chutney; canned chestnuts and chestnut puree; canned brassica vegetables; canned leafy vegetables; canned legume vegetables; pickled cucumbers (cucumber pickles); preserved tomatoes; processed tomato concentrates; table olives; and fungi and mushrooms.

Proposed Draft Maximum Levels for Cadmium in Chocolate and Cocoa-Derived Products

Ecuador, as Chair of the eWG, reported on the eWG findings and informed the Committee that the eWG needed more reflection to reach consensus based on the diverse comments received. The Committee agreed with this recommendation and re-established the eWG to continue this work, returning the draft MLs to Step 2/3.

Ecuador agreed to continue to chair the eWG with Brazil and Ghana as Co-Chairs. The eWG will also provide recommendations on which cocoa-derived products should have MLs.

Proposed Draft Maximum Levels for Inorganic Arsenic in Husked Rice

The Committee agreed to forward the proposed draft ML of 0.35 mg/kg of inorganic arsenic in husked rice to the CAC for adoption at Step 5 (subject to further consideration at the 2016 session of CCCF). The delegations of the European Union, Japan, and Norway recorded reservations to this ML, favoring a lower level.

The eWG was re-established with China as Chair and Japan as co-Chair, to consider additional data not yet received, especially data from major rice producing countries and countries having a high consumption of husked rice. The Committee strongly encouraged delegations to submit data timely so that the ML could be finalized by the next session.

Proposed Draft Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice

The Committee focused on revisions to Sections 1 (Introduction) and 2 (Scope) of the code of practice. The revised scope is limited to source-directed and agricultural measures to reduce and prevent arsenic contamination in rice. The Committee agreed to re-establish the eWG, led by Japan and co-chaired by China, to continue work, returning the code of practice to Step 2/3 for further development and comments.



Draft Maximum Levels for DON in Flour, Meal, Semolina and Flakes Derived from Wheat, Maize or Barley; and in Raw Cereal Grains (Wheat, Maize and Barley) and including Sampling Plans for Raw Cereal Grains

The Committee agreed to advance the following for final adoption at Step 8:

- 1 mg/kg in flour, meal, semolina and flakes derived from wheat, maize or barley; and,
 - 2 mg/kg in cereal grains (wheat, maize and barley) for further processing
- CCCF members considered several issues with respect to these MLs, including whether there should be an ML for raw cereal grains and whether, if so, it should apply to the commodity before or after sorting. Canada, United States, and Tanzania supported establishing an ML only for flour, meal, semolina and flakes derived from wheat, maize or barley, noting there were many processes available to reduce DON levels in the semi-processed products that would be health protective. Other delegations supported MLs for both raw grains and semi- processed products, noting that raw grains serve as a primary material for food products and an ML for semi-processed products was needed for countries which did not have sophisticated milling processes to remove DON.

As a way forward, the EU proposed to describe grains as “destined for further processing” instead of “raw grains.” The EU noted that such language was used before by Codex with respect to aflatoxins in certain commodities and proposed adding a note to refer to measures for further processing for greater clarity.

CCCF agreed to forward the ML for DON of 2 mg/kg in cereal grains (wheat, maize and barley) destined for further processing with a note clarifying that additional processing refers to treatments proven to reduce levels of DON.

The Russian Federation expressed a reservation to the ML for both the cereal grains intended for further processing and to the ML for flour, meal semolina and flakes from wheat. The European Union and Norway recorded reservations to the proposed limit of 1 mg/kg for flour, meal, semolina, and flakes derived from wheat, maize or barley for flour. Delegations expressing reservations favored lower MLs.

Draft Maximum Levels for DON in Cereal-Based Foods for Infants and Children

Several delegations stated that the ML should be as low as possible, in accordance with the principle of as low as reasonably achievable (ALARA) and given the need to protect vulnerable population groups such as infants and young children. The United States and Canada supported a level of 0.5 mg/kg on a *dry matter basis* or 0.2 mg/kg on an “*as consumed basis*,” noting that the higher level was more achievable and health protective.



The Committee noted the wider support for the ML of 0.2 mg/kg on a *dry matter basis* and agreed to advance this ML to the Commission for adoption at Step 8. The Russian Federation took the position that a level of 0.2 mg/kg on a *dry matter basis* would not provide adequate health protection and recorded a reservation to the ML.

Sampling Plans and Methods of Analysis (DON)

The Committee also agreed to submit DON sampling plans and performance criteria for methods of analysis for endorsement by the Codex Committee on Methods of Analysis and Sampling (CCMAS).

Recalling previous discussions, the Committee also agreed to align the sampling plan for DON in cereal grains with the sampling plan for fumonisins and extend its application to cereal-based foods for infants and young children and to flour, semolina, meal, and flakes derived from wheat, maize or barley.

[Note: On the margins of the plenary sessions, the American Association of Cereal Chemists International presented a paper entitled “DON Occurrence in Grains: A North American Perspective” that was well received by the attendees. This paper can be accessed at <http://dx.doi.org/10.1094/CFW-60-1-0032>]

Proposed Draft Maximum Level for Total Aflatoxins in Ready-to-Eat Peanuts (RTE) and Associated Sampling Plans

After extensive discussion, the Committee decided to request JECFA to conduct an exposure assessment of the proposed MLs and to calculate potential exceedance rates based on hypothetical MLs of 4, 8, 10, and 15 µg/kg for total aflatoxins in RTE peanuts. The Committee agreed to suspend work on the proposed draft ML and sampling plan (at Step 4), pending the outcome of the JECFA exposure assessment.

Proposed Draft Revision of the Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cereals (CAC/RCP 51-2003)

The Committee agreed to forward the main text of the proposed draft revision to the Commission for adoption at Step 5 and return the annexes to Step 2/3 for further consideration by the eWG, to be led by Brazil as Chair and the United States and Canada as Co-Chairs.

The Committee noted the proposal for an additional annex on ergot alkaloids and accepted Germany’s offer to develop a discussion paper for the Committee’s consideration at the next session.



Discussion Paper on Submission and Use of Data from the Global Environment Monitoring System (GEMS)/Food Platform

The Committee agreed to the World Health Organization (WHO) proposal to use the GEMS/Food platform for data submission and analysis for the development of MLs. The WHO representative informed the Committee that the GEMS/Food template for data collection could be modified to include additional information upon request to the GEMS Secretariat.

Discussion Paper on Approaches for Phasing in of Lower Maximum Levels for Contaminants

The WHO representative introduced the document and explained the background of the discussion paper and the proposed approach for the phasing in of lower maximum levels for contaminants.

Members expressed general support for this approach but noted several concerns with proposal as currently drafted, such as the need to define what is a “slightly higher ML,” the criteria for the target ML, and a time frame to establish an ML. CCCF did not come to consensus on this WHO proposal, but agreed to keep this approach under consideration.

Discussion Paper on Maximum Levels for Methylmercury in Fish

The Committee considered the need to establish maximum levels for methylmercury in fish. Some delegations, including the United States, noted the net benefits of fish consumption and that establishing an ML or Guideline (GL) could deter fish consumption. Also, there were questions as to the practicality and high cost of testing involved with using MLs to manage the risk of methylmercury exposure. Different consumption patterns and types of fish in different regions were other potential complications. Several delegations supported establishing an ML, arguing that it could facilitate international trade and enhance consumer protection. Some delegations noted the need to extend of scope to fish other than tuna that accumulate methylmercury.

The Committee agreed to re-establish the eWG, led by Japan and co-chaired by New Zealand, to prepare a discussion paper that would consider (1) MLs for fish species other than tuna with high methylmercury levels, and (2) narrowing the ML ranges. The eWG will also develop a project document for consideration by the next session.

Discussion Paper on Radionuclides

The Netherlands, as chair of the eWG, introduced the discussion paper by describing the five issues under the mandate of the eWG, namely (1) the food production stage at

which radionuclide GLs apply, (2) the time period during which the GLs apply to food after a nuclear or radiological emergency, (3) internationally validated methods of analysis, (4) sampling plans, and (5) additional guidance needs. In addition, the International Atomic Energy Agency (IAEA) representative reported on the activities of the Inter-Agency Working Group on Radionuclides.

The Committee noted that the International Commission on Radiological Protection (ICRP) was reviewing dose coefficients for ingestion of radionuclides to assess public exposure and the associated health risk from intake of radionuclides in foods and agreed to postpone further discussion until the ICRP review is completed.

Discussion Paper on Mycotoxin Contamination in Spices (Priorities for Potential Work on Maximum Levels for Mycotoxins in Spices)

The Committee expressed interest in continuing work on MLs in spices and agreed to re-establish the eWG, led by India and co-chaired by Indonesia and the European Union, to prepare a new discussion paper and project document.

Discussion Paper on Feasibility to Develop a Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Spices

The Committee considered the recommendations in the discussion paper and agreed to request the Commission to approve new work on a code of practice for the prevention and reduction of mycotoxin contamination in spices. Pending approval by CAC 38 (2015) an eWG was established with India as Chair and the Netherlands as Co-Chair, with the mandate to prepare a revised proposed draft code of practice for circulation for comments at Step 3 and draft a discussion paper on possible annexes for combinations of mycotoxins with individual spices or groups of spices.

Priority List of Contaminants and Naturally Occurring Toxicants for Evaluation by JECFA

The Committee endorsed the following list of contaminants and naturally occurring toxicants for JECFA evaluation:

- Sterigmatocystin – safety assessment
- Diacetoxyscirpenol – safety assessment
- Fumonisin – update exposure assessment
- Aflatoxins – update risk assessment, impact assessment of different MLs in RTE peanuts, effect of exposure and health, and assessment of violation rates with these different MLs
- 3-MCPD esters - full evaluation (toxicological assessment and exposure assessment)



- Glycidyl esters – full evaluation (toxicological assessment and exposure assessment) and bioavailability of free compounds
- Scopoletin – full evaluation (toxicological assessment and exposure assessment) in fermented Noni juice
- Inorganic arsenic – evaluation of non-cancer effects (neurodevelopmental, immunological and cardiovascular)
- Dioxins – full evaluation (toxicological assessment and exposure assessment) [the Committee noted that dioxins would not be a high priority]
The JECFA Secretariat informed the Committee that the four mycotoxins on the priority list (i.e., sterigmatocystin, diacetoxyscirpenol, fumonisins, and aflatoxins) will be evaluated together and a JECFA meeting on mycotoxins is tentatively planned for 2016.

Date and Place of the Next Session

The 10th Session of the Committee is tentatively set for April 4-8, 2016, in the Netherlands.