



## Delegate's Report, 11th Session, Codex Committee on Contaminants in Food

*April 3-7, 2017*

*Rio de Janeiro, Brazil*

The United States believes the 11th Session of the Codex Committee on Contaminants in Food (CCCF) was a productive session. Among the agenda items discussed at this Session, CCCF completed work on maximum levels for lead in a number of commodities and finalized the Codex of Practice for the Prevention and Reduction of Arsenic Contamination in Rice. The 11th Session of the CCCF was attended by 49 Member countries, 1 Member organization (the European Union), and 11 international organizations. The U.S. Delegation was led by Dr. Lauren Posnick Robin (Head of Delegation) from the U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, and Mr. Terry Dutko (Alternate Delegate) from the U.S. Department of Agriculture, Food Safety and Inspection Service, assisted by 6 government and 6 non-government advisors.

### *HIGHLIGHTS*

*The Committee completed work on the following four items and forwarded them for final adoption by the Codex Alimentarius Commission at its 40th Session (CAC40, July 2017):*

- proposed revised draft maximum levels (MLs) in the General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) for lead in preserved tomatoes at 0.05 mg/kg; jams, jellies and marmalades at 0.4 mg/kg; canned chestnuts and chestnuts puree at 0.05 mg/kg; and pulses at 0.1 mg/kg,
- proposed draft Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice to the CAC40 2017 for final adoption,
- proposed draft Annex on Ergot and Ergot Alkaloids in Cereal Grains (Annex to the Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cereals (CAC/RCP 51-2003)), and
- proposed draft Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Spices.

*The Committee will continue to work on the following eight items and agreed to:*

- re-establish the electronic working group (eWG), led by the United States to continue to work on reviewing MLs in the GSCTFF for lead in juices from berries and other small fruit (grape juices), processed tomato concentrates, mango chutney, canned brassica vegetables, and fungi and mushrooms. MLs for processed tomato concentrates at 0.05 mg/kg and canned brassica vegetables at 0.1 mg/kg were forwarded to CAC40 for adoption at Step 5, which will allow for further comment and consideration. The Committee also agreed to review the MLs for salt, wine, edible fats and oils, fat spreads, and blended spreads,

- re-establish the eWG, chaired by Ecuador and co-chaired by Brazil and Ghana to prepare proposals for cadmium MLs for the identified categories for “chocolate” and “cocoa-powder and dry mixtures of cocoa and sugars” sold for final consumption,
- issue a Circular Letter requesting comments on the levels of 10 µg/kg and 15 µg/kg for total aflatoxins in ready-to-eat peanuts, and to re-establish the eWG, led by India, working in English only, to request consideration of comments and information received, and to prepare a revised proposal for further comments and consideration by the next session of CCCF,
- establish an eWG, led by Brazil, to prepare a discussion paper on aflatoxins and sterigmatocystin in cereals (in particular, maize, rice, sorghum, and wheat),
- establish an eWG, led by Peru to prepare a discussion paper on the opportunity to develop a Code of Practice for the Prevention and Reduction of Cadmium Contamination in Cacao,
- establish an eWG, led by Nigeria, to prepare a discussion paper to advise on the need and feasibility to establish an ML for hydrocyanic acid (HCN) in all fermented cassava products and address the issue of harmonizing the expression of HCN, i.e., free or total HCN, and to consolidate information on mycotoxin occurrence in these products,
- request Brazil to prepare a discussion paper on an overview of commodities not in the GSCTFF for which new MLs for lead could be established, and
- endorse six chemical contaminants and naturally occurring toxicants for Joint FAO/WHO Expert Committee on Food Additives (JECFA) evaluation and agreeing to reconvene the in-session working group on JECFA priorities at the next session of the Committee.

*The Committee agreed to submit to the CAC40 for approval the following five proposals for new work:*

- MLs for aflatoxins and ochratoxin A in nutmeg, chili and paprika, ginger, pepper and turmeric, with India chairing an eWG, working in English only, to prepare a proposal for circulation for comments and consideration by the next session of CCCF,
- MLs for methylmercury in fish (tuna, albacore, kingfish/amberjack, marlin, shark, dogfish, and swordfish), with the Netherlands chairing an eWG, co-chaired by Canada and New Zealand, and working in English only, to prepare proposals for MLs and associated sampling plans for circulation for comments and consideration by the next session of CCCF,
- inclusion of measures for non-dioxin like PCBs in the Code of Practice for the Prevention and Reduction of Dioxins and Dioxin-Like PCB Contamination in Foods and Feed (CAC/RCP 62-2006) with the EU chairing an eWG, working in English only, to revise the Code of Practice for comments and consideration by the next session of CCCF,
- a Code of Practice for the Reduction of 3-Monochloropropane-1,2-Diol Esters and Glycidyl Esters in Refined Oils and Products Made with Refined Oils,



- Especially Infant Formula, with the U.S. chairing an eWG, co-chaired by the EU and Malaysia, working in English only, to follow-up on this new work, and
- development of risk analysis guidelines to address chemicals inadvertently present in food at very low levels, with New Zealand chairing a eWG, co-chaired by the Netherlands, for comments and consideration by the next session of CCCF.

The following represents the summary of issues that were raised during this Session. The full report of the Session can be found on the Codex Website, [www.codexalimentarius.net](http://www.codexalimentarius.net).

### *MEETING SUMMARY*

#### **Matters Referred to the Committee by the Codex Alimentarius Commission and/or its Subsidiary Bodies**

##### **FAO/WHO Coordinating Committee for Africa (CCAFRICA) Proposed draft Regional Standard for Fermented Cooked Cassava-based Products**

###### *Hydrocyanic acid (HCN) and Mycotoxins*

The Committee agreed to establish an eWG led by Nigeria to prepare a discussion paper to on the need and feasibility of establishing an Maximum Level (ML) for HCN in all fermented cassava products and address the issue of harmonizing the expression of HCN, i.e., free or total HCN, and to issue a Circular Letter to solicit data on occurrence of HCN and other relevant information in fermented cassava products. The eWG would then consolidate information on mycotoxin occurrence in these products for CCCF to determine if mycotoxin contamination in these products would be a health concern.

#### **Committee on Fats and Oils (CCFO)**

###### *MLs for lead*

The Committee noted that the ML for lead in fish oils can be the same as the current ML for lead in edible fats and oils, as the seafood is naturally low in lead. The Committee therefore agreed to add a reference to the Standard for Fish Oils.

###### *ML for arsenic*

The Committee noted that arsenic is mainly found in its less toxic organic form in seafood. Similarly, while oils derived from fish can contain elevated levels of total arsenic, the majority is in the form of arsenosugars and arsenolipids.

The Committee therefore agreed that the ML for arsenic in fish oils can be the same as the current ML for arsenic in edible fats and oils and to indicate that the ML for fish oils is specific to inorganic arsenic, while noting that total arsenic could be used for screening purposes.



## **Matters of Interest Arising From FAO and WHO (including JECFA)**

### **WHO Guidelines for Drinking Water Quality and Health-Related Limits for Certain Substances in the Standard for Natural Mineral Waters (CODEX Stan 108-1981)**

The Committee noted the work completed by WHO and the revised values for some elements in the WHO Guidelines for Drinking Water Quality (GDWQ). After some discussion, the Committee agreed that it was not necessary to embark on new work to revise Standard for Natural Mineral Waters to align with the GDWQ at the current time.

### **FAO/WHO Work on Ciguatoxins**

The Committee agreed to request scientific advice from FAO/WHO to develop appropriate risk management options and noted that the in-session working group on the priority list of contaminants and naturally occurring toxicants for evaluation by JECFA would consider this matter further.

### **Proposed Draft Revision of the Maximum Levels for Lead in Selected Fruits and Vegetables (fresh and processed) and Other Selected Commodities in the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995)**

The United States chaired the eWG for this work to review MLs for lead in selected fruits and vegetables (fresh and processed) and other commodities.

The Committee agreed to forward the proposed revised draft for processed tomatoes at 0.05 mg/kg and for jams, jellies and marmalades at 0.4 mg/kg MLs to the CAC40 for final adoption at Step 8; for canned chestnuts and chestnuts puree at 0.05 mg/kg and for pulses at 0.1 mg/kg for final adoption at Step 5/8. The Committee decided to forward for adoption at Step 5 processed tomato concentrates at 0.05 mg/kg and canned brassica vegetables at 0.1 mg/kg to allow for additional consideration and await more data. The Committee subsequently will request revocation of existing MLs for the commodities proposed for adoption at Steps 8 and 5/8.

The Committee agreed to retain the MLs of 0.3 mg/kg for fish and 0.05 mg/kg for juices and nectars obtained exclusively from berries and small fruits and to work on a positive list of fruit juices that could achieve lower levels (e.g., 0.03 or 0.04 mg/kg) once more data becomes available. The Committee agreed to re-establish the eWG, led by the United States, to review whether a lower ML could be established for juices and nectars obtained exclusively from berries and other small fruits on the positive list; processed tomato concentrates; mango chutney; canned brassica vegetables; and farmed Agaricus, shiitake, and oyster mushrooms.

In addition, the Committee agreed to review the following categories: salt, wine, edible fats and oils, fat spreads and blended spreads and to use a simplified approach for



reviewing the fats, oils, and spread categories, instead of a detailed breakdown of these categories to facilitate the establishment and enforcement of MLs.

The Committee also agreed to have Brazil prepare a discussion paper on an overview of commodities not covered under the GSCTFF for which new MLs for lead could be established.

### **Proposed draft Maximum Levels for Cadmium in Chocolate and Cocoa-derived Products**

The Committee agreed to establish an eWG, chaired by Ecuador and co-chaired by Brazil and Ghana to prepare proposals for MLs for the identified categories for “chocolates” and “cocoa powder and dry mixtures of cocoa and sugars” sold for final consumption.

The Committee agreed to endorse the following categories for “chocolates” and for “cocoa powder and dry mixtures of cocoa and sugars:”

#### *Categorization for chocolates*

- Chocolate products containing or declaring < 30% total cocoa solids on a dry matter basis
- Chocolate and chocolate products containing or declaring  $\geq 30\%$  to < 50% total cocoa solids on a dry matter basis
- Chocolate containing or declaring  $\geq 50\%$  to < 70% total cocoa solids on a dry matter basis
- Chocolate containing or declaring  $\geq 70\%$  total cocoa solids on a dry matter basis

#### *Categorization for cocoa powder and dry mixtures of cocoa and sugars sold for final consumption*

- Dry mixtures of cocoa and sugars containing < 29% total cocoa solids on a dry matter basis
- Dry mixtures of cocoa and sugars containing  $\geq 29\%$  to < 50% total cocoa solids on a dry matter basis
- Dry mixtures of cocoa and sugars containing  $\geq 50\%$  total cocoa solids on a dry matter basis
- Cocoa powder (100% total cocoa solids on a dry matter basis)

The Committee also agreed to discontinue work on intermediate products and that the Codex Secretariat would issue a request for data through a Circular Letter.

### **Proposed draft Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice**



The Committee agreed to forward the proposed draft Code of Practice to the CAC40 for final adoption at Step 5/8.

The Committee considered the proposed revisions highlighted by the eWG Chair Japan and finalized the Code of Practice with a note stating that complementary information on measures could be further developed when new data and information on mitigation measures become available.

### **Proposed draft Maximum Level for Total Aflatoxins in Ready-To-Eat Peanuts**

India, as the Chair of the previously established eWG, recalled that the ML of 10 µg/kg for total aflatoxins in ready-to-eat peanuts had been not been progressed by the 9th Session of CCCF (March 2015), pending a JECFA exposure assessment for health impact of hypothetical MLs of 4, 8, 10, and 15 µg/kg and calculation of violation rates for the ML, and proposed an ML of 15 µg/kg based on the outcome of the 83rd JECFA (November 2016) and JECFA's finding that a lower ML would have little impact on dietary exposure to total aflatoxins for the general population and the shipment rejection rate at an ML of 15 µg/kg would be less than at a lower ML.

Delegations, including the European Union and Japan, Norway, Chile and Cuba, opposed the recommendation and supported an ML of 10 µg/kg, based on the reasoning that violation rates were close in range between the levels of 10 µg/kg and 15 µg/kg and the violation rate should not be a justification for replacing the previously proposed ML. According to these delegations, the ML should be 10 µg /kg because it should be lower than the ML for peanuts destined for further processing which would reduce aflatoxin levels; and setting the ML at 15 µg/kg was not consistent with the criteria in the GSCTFF that MLs should be as low as reasonably achievable (ALARA) and be based on good management practices, which was the approach taken for setting MLs for other nuts such as almonds, Brazil nuts, hazelnuts, pistachios destined for further processing and ready-to-eat.

Delegations, including the United States, Senegal, Nigeria, New Zealand, Cameroon, Ghana, Korea, Indonesia, and Canada were in favor of the proposed ML of 15 µg/kg and noted that peanuts were usually a small component of the diet and that at the proposed ML of 15 µg/kg the violation rate was already 9.7%, which was higher than the usual cut-off level of less than/equal to a 5% violation rate used by CCCF when applying the ALARA principle in the establishment of MLs to be health protective with a minimum negative impact on trade. A lower ML would offer little additional health protection even in high consuming populations, but instead would result in greater rejections and have a negative impact on trade.

The Committee agreed to request comments on MLs of 10 µg/kg and 15 µg/kg, in view of the lack of consensus on the recommendation by India for 15 µg/kg and the need for further consideration of the JECFA report. The Committee also agreed to re-establish an eWG, chaired by India to prepare a revised proposal for the next session of CCCF.



### **Proposed draft Annex on Ergot and Ergot Alkaloids in Cereal Grains (Annex to the Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cereals (CAC/RCP 51-2003))**

The Committee agreed to forward the draft annex to the CAC40 for final adoption at Step 5/8 and inclusion in the Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cereals (CAC/RCP 51-2003).

### **Proposed draft Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Spices**

The Committee agreed to editorial revisions proposed by Spain as chair of the eWG Chair and finalized the draft Code of Practice, and agreed to forward the draft Code of Practice to the CAC40 for final adoption at Step 5/8.

The Committee also agreed to discontinue work on the annexes until further information on specific management practices became available and refrain from referring any text to the Codex Committee on Food Hygiene (CCFH), since the Code of Hygienic Practice for Low-moisture Foods (CAC/RCP 75-2015) and its annex on spices already covered practices for transport and packaging similar to the advice contained in the draft Code of Practice (see paragraphs 63-69 and 78 of Proposed Draft Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Spices CX/CF 10/16/12, Appendix I).

### **Discussion Paper on Maximum Levels for Mycotoxins in Spices**

The Committee agreed to start new work on MLs for aflatoxins and ochratoxin A in nutmeg, chili and paprika, ginger, pepper and turmeric and to submit the revised project document for approval by the CAC40.

An eWG, led by India, subject to approval of new work by the CAC40, would prepare a proposal for circulation for comments and consideration by the next session of CCCF.

The Committee also agreed that eWG Chairs will use the GEMS/Food platform for data submission and analysis for its work in the development of MLs.

### **Discussion Paper on Maximum Levels for Methylmercury in Fish**

The Committee agreed to start new work on MLs for methylmercury in fish (tuna, alfonso, kingfish/amberjack, marlin, shark, dogfish and swordfish) and to submit the revised project document to the CAC40 for approval.

The Committee agreed to establish MLs:

- based on the ALARA principle,
- for methylmercury, while screening for total mercury,
- for tuna as a group, and



- for the following fish species: alfonsino, kingfish/amberjack, marlin, shark, dogfish and swordfish.

The Committee agreed not to establish MLs for canned tuna.

An eWG, chaired by the Netherlands, and co-chaired by Canada and New Zealand, subject to approval of new work, would prepare proposals for MLs and associated sampling plans for circulation for comments and consideration by the next session of the Committee.

The Secretariat would request further data on total mercury and methylmercury in fish through a Circular Letter.

### **Discussion Paper on Non-Dioxin Like PCBs in the Code of Practice for the Prevention and Reduction of Dioxin and Dioxin-Like PCBs**

The European Union, as Chair of the eWG, introduced the item and recalled that CCCF 10 (2016) had requested the development of a discussion paper to if the Code of Practice for the Prevention and Reduction of Dioxins and Dioxin-Like PCB Contamination in Foods and Feed (CAC/RCP 62-2006) could be revised to include measures also for non-dioxin like PCBs. The delegation stated that it was appropriate to revise the document for this purpose, and that additional measures had also been identified for the prevention and reduction of dioxins and dioxin-like PCBs, ( e.g., cooking practice and carry-over from feed to food), and proposed that the revision of the Code also take up these measures.

The Committee agreed to start new work on inclusion of measures for non-dioxin like PCBs in the Code of Practice for the Prevention and Reduction of Dioxins and Dioxin-Like PCB (polychlorinated biphenyls) Contamination in Foods and Feed (CAC/RCP 62-2006) and to establish an eWG, led by the European Union, subject to approval by the CAC40, to revise the Code of Practice for comments and consideration by the next session of CCCF.

### **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, as recommended by the in-session working group chaired by the United States:

- Dioxins – full evaluation (toxicological assessment and exposure assessment) to update 2001 JECFA assessment and incorporate data on developmental effects from *in utero* exposures.
- Inorganic arsenic – The 2011 JECFA evaluation was based on cancer effects. This evaluation would focus on non-cancer effects (neurodevelopmental,

immunological and cardiovascular) and could inform future risk management needs.

- Scopoletin – full evaluation (toxicological assessment and exposure assessment) in fermented noni juice.
- Ergot alkaloids – full evaluation (toxicological assessment and exposure assessment). Evaluate relationship between ergot sclerotia and ergot alkaloids.
- Ciguatoxins – full evaluation (toxicological assessment and exposure assessment), including geographic distribution and rate of illness; congeners; methods of detection.
- Trichothecenes (T2 and HT2) – update of risk assessment, including exposure assessment (T2, HT2, DAS).

### **Other Business and Future Work**

*Report of the in-session working group on the follow up to the outcome of the 83rd meeting of JECFA (Rome, November 2016)*

The Committee agreed to:

- Trichothecenes (T2 and HT2) – update of risk assessment, including exposure assessment (T2, HT2, DAS).
- endorse a proposal for new work, subject to approval by the CAC40, on a Code of Practice for the Reduction of 3-Monochloropropane-1,2-diol Esters and Glycidyl Esters in Refined Oils and Products Made with Refined Oils, Especially Infant Formula, and to establish an eWG, chaired by the U.S. and co-chaired by the EU and Malaysia, working in English, to follow up on this new work.
- establish an eWG, chaired by Brazil, to prepare a discussion paper on aflatoxins and sterigmatocystin in cereals (in particular, maize, rice, sorghum, and wheat) to enable the next session of the Committee to make an informed decision on the appropriate follow-up on possible risk management options for aflatoxins and sterigmatocystin in cereals.
- request JECFA to update its 2001 evaluation of T-2/HT-2 toxin taking into account new toxicity studies. Furthermore, the exposure assessment should be based on more recent occurrence data on the presence of T-2 and HT-2 toxins and 4,15-1 Diacetoxyscirpenol (DAS) in food.
- call on African, Eastern Mediterranean or Southeast Asian countries to provide GEMS/Food with information on fumonisin levels in maize.

*Emerging Issues: A proposed risk management approach to address chemicals inadvertently present in food at very low levels (Proposal from New Zealand)*

The Committee agreed to endorse new work on the development of risk analysis guidelines to address chemicals inadvertently present at very low levels and to forward a project document to the CAC40 for approval. The United States presented current U.S. approaches to handling these issues at a workshop the day before the CCCF session.



*Code of Practice for the Prevention and Reduction of Cadmium Contamination in Cacao  
(Proposed by Peru)*

The Committee agreed to establish an eWG, chaired by Peru, to prepare a discussion paper and a project document on the development of such a Code of Practice and the risk mitigation measures available that would support the development of a Code of Practice, for discussion at the next session of CCCF.

*Next Session*

The 12th Session of the CCCF is tentatively scheduled to be held in The Netherlands in approximately one year's time (April 2018).