REPORT OF THE UNITED STATES DELEGATE
ON THE 15TH SESSION OF THE
CODEX COMMITTEE ON CONTAMINANTS IN FOODS

May 9-13 and May 24, 2022
Virtual

The 15th Session of the Codex Committee on Contaminants in Foods (CCCF15) convened virtually May 9-13, 2022, with report adoption May 24. The session was chaired by the Netherlands and was attended by 85 Member Countries, 1 Member Organization (the European Union), 17 observer organizations, and Palestine. 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. Alexander Domesle (Alternate Delegate) from the U.S. Department of Agriculture, Food Safety and Inspection Service. The U.S. Delegation also included 8 government advisors and 6 non-government advisors.

CCCF15 was a productive session and completed work on maximum levels (MLs) for cadmium, lead, methylmercury, and aflatoxins, and a Code of Practice (COP) for the Prevention and Reduction of Cadmium in Cocoa Beans, which were recommended for final adoption by the 45th Session of the Codex Alimentarius Commission (CAC45, November 2022), consistent with U.S. positions and comments.

Notably, the Committee recommended final adoption of the following MLs: 2.0 mg/kg cadmium in cocoa powder, 100% total cocoa solids on a dry matter basis (work chaired by Ecuador); 0.02 mg/kg lead in cereal-based foods for infants and young children, 0.1 mg/kg for lead in white sugar, honey, corn and maple syrups (work chaired by Brazil); 0.1 mg/kg for lead in sugar-based candies; 0.8 mg/kg methylmercury for orange roughy and 1.0 mg/kg methylmercury for pink cusk eel (work chaired by New Zealand and co-chaired by Canada); 15 µg/kg total aflatoxins for maize grain destined for further processing, 10 µg/kg total aflatoxins for flour, meal, semolina, and flakes derived from maize, 20 µg/kg total aflatoxins for husked rice, 5 µg/kg total aflatoxins for polished rice, 10 µg/kg total aflatoxins for sorghum grain destined for further processing, 5 µg/kg total aflatoxins for cereal-based foods for infants and young children, excluding food aid, and 10 µg/kg total aflatoxins for cereal-based foods for older infants and young children in food destined for food aid programs (work chaired by Brazil).

The Committee also recommended final adoption of the revised COP for the Prevention and Reduction of Cadmium Contamination in Cocoa Beans (CXS 56-2004) (work chaired by Peru and co-chaired by Ecuador).

Finally, the Committee recommended interim adoption of an ML of 0.02 mg/kg for lead in ready-to-eat (RTE) meals for infants and young children (work chaired by Brazil) and interim adoption of a COP for the Prevention and Reduction of Mycotoxin Contamination in Cassava and Cassava-Based Products (work chaired by Nigeria). CCCF will continue work on these issues at its next session.

The following represents the summary of the most significant agenda items and issues from the 15th Session. The full official report of the Session can be found on the Codex website.

HIGHLIGHTS

Texts for adoption at CAC45 (2022)

The Committee sent the following draft COP to CAC45 (2022) for final adoption at Step 8 (final

adoption):

- Draft COP for the Prevention and Reduction of Cadmium in Cocoa Beans (CXS 56-2004)

The Committee sent the following draft MLs to CAC45 (2022) for adoption at Step 5/8 (final adoption):

- Draft ML for cadmium in cocoa powder, 100% total cocoa solids on a dry matter basis
- Draft ML for lead in cereal-based foods for infants and young children
- Draft ML for lead in white sugar, honey, and corn and maple syrups
- Draft ML for lead in sugar-based candies
- Draft ML for methylmercury in orange roughy
- Draft ML for methylmercury in pink cusk-eel
- Draft ML for total aflatoxins in maize grain destined for further processing
- Draft ML for total aflatoxins in flour meal, semolina, and flakes derived from maize
- Draft ML for total aflatoxins in husked rice
- Draft ML for total aflatoxins in polished rice
- Draft ML for total aflatoxins in sorghum grain destined for further processing
- Draft ML for total aflatoxins in cereal-based food for infants and young children, excluding food for food aid programs
- Draft ML for total aflatoxins in cereal-based food for older infants and young children, food destined for food aid programs

The Committee sent the following ML and COP to CAC45 (2022) for adoption at Step 5 (interim adoption, allowing for another round of consideration by the Committee at its next session):

- Draft ML for lead in RTE meals for infants and young children
- Draft COP for Prevention and Reduction of Mycotoxin Contamination in Cassava and Cassava-Based Products

The Committee sent the following amendments to CAC45 (2022) for approval:

- An amendment to the MLs in the General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) to add provisions for the portion of the commodity to which the ML applies for chocolates, i.e., whole commodity as prepared for wholesale or retail distribution containing or declaring <30% total cocoa solids on a dry matter basis and chocolates containing or declaring ≥30% to <50% total cocoa solids on a dry matter basis.
- A consequential amendment to the notes/remarks for the ML in the GSCTFF for deoxynivalenol (DON) in cereal-based foods for infants and young children to apply to: whole commodity as sold; not reconstituted or otherwise prepared for consumption.

Ongoing and New Work

The Committee also agreed to continue or start work on the following for CCCF16 (2023):

- Work chaired by Brazil on draft MLs for lead in culinary herbs (fresh/dried) and spices (dried), brown and raw sugars, and RTE meals for infants and young children
- Work chaired by New Zealand and co-chaired by Canada on a sampling plan for methylmercury in fish
- Work chaired by Brazil and co-chaired by India on a sampling plan for total aflatoxins in maize grain destined for further processing; flour, meal, semolina, and flakes derived from maize; husked

and polished rice; sorghum grain destined for further processing; and cereal-based food for infants and young children
- Work chaired by India and co-chaired by Senegal on MLs for total aflatoxins in RTE peanuts and associated sampling plan
- Work chaired by India on MLs for total aflatoxins and ochratoxin A in spices: nutmeg, dried chili and paprika, ginger, pepper, and turmeric, and an associated sampling plan
- Work chaired by Nigeria on a COP for the prevention and reduction of mycotoxin contamination in cassava and cassava-based products
- Work chaired by the European Union and co-chaired by Japan, the Netherlands, and the United States on guidance on data analysis for development of MLs and for improved data collection
- Work chaired by Canada on implementation of a three year pilot project on the review of existing CCCF Codex standards
- Work on review of contaminant/staple food combinations by the Netherlands and the FAO/WHO Joint Expert Committee on Food Additives (JECFA) and Codex Secretariats
- Work chaired by the European Union on pyrrolizidine alkaloids and the feasibility of possible follow-up actions to the JECFA assessment
- Work chaired by the United States and co-chaired by the European Union on a discussion paper on the development of a code of practice or guidelines to prevent or avoid ciguatera poisoning

MEETING SUMMARY

Matters of Interest Arising from Other International Organizations (Agenda Item 4)

The representative of the Joint Food and Agriculture Organization (FAO)/International Atomic Energy Association (IAEA) Centre provided an update on ongoing international work on radionuclides in food, feed, and drinking water in non-emergency situations. A short informative document on naturally occurring radionuclides in food, feed, and water will be presented to CCCF for comment and feedback from Codex members.

Maximum Level for Cadmium in Cocoa Powder (100% total cocoa solids on a dry matter basis) (Agenda Item 5)

Ecuador, as Chair of the electronic working group (EWG) and speaking on behalf of co-Chair Ghana, introduced the item and summarized the mandate of the EWG from CCCF14 (2021), the work process to develop MLs, and the recommendations for consideration by CCCF. The EWG Chair said the EWG only considered data analysis based on the Global Environment Monitoring System (GEMS)/Food database, and not the proportionality approach that CCCF had agreed to use at previous sessions. The EWG Chair proposed an ML of 2-3 mg/kg. Australia, Argentina, Peru, Colombia, Canada, Costa Rica, Chile, Belize, Dominican Republic, Ecuador, Paraguay, and India supported 3 mg/kg or the upper end of the 2-3 mg/kg range. Brazil, Morocco, and the United States supported 2 mg/kg or the lower end of the range. Mexico supported 2-3 mg/kg, and Indonesia and Cameroon supported 1.3-1.5 mg/kg. The EU, Egypt, and Palestine supported 0.6 mg/kg. Uganda and Syria requested more time to gather data.

The United States noted that CCCF had agreed to consider proportionality of total cocoa solids to previously adopted MLs for cadmium in chocolate as an approach to establish an ML for cadmium in cocoa powder. It was noted that the higher end of the proposed range was not proportional to previously established MLs, based on either total cocoa solids or non-fat cocoa solids. The United States did not object to an ML at the lower end of the proposed range taking into account proportionality to non-fat cocoa solids.

The Chair proposed an ML of 2.0 mg/kg as a compromise given proposals ranging from 0.6 to 3 mg/kg. CCCF agreed to advance an ML of 2.0 mg/kg for final adoption at Step 5/8, and noted reservations from the European Union, Egypt, Cameroon, and Uganda.

During report review, the United States questioned explicit references to the European Union's statements in three paragraphs of the plenary report, which contradicts the normal practice of not identifying member countries by name in the report except when specifically requested and when recording reservations. The United States also questioned a citation of the European Union Tolerable Weekly Intake, as JECFA is the primary risk assessor for CCCF. The Codex Secretariat and Chair concluded that inclusion of these paragraphs and citation were allowed as an exceptional circumstance.

Code of Practice (COP) for the Prevention and Reduction of Cadmium Contamination in Cocoa Beans (Agenda Item 6)

Peru, as Chair of the EWG, introduced the agenda item and recalled that the COP had been adopted at Step 5 (interim adoption, allowing for another round of consideration by the Committee) by CAC44 (2021). Peru further noted that revisions had been made in response to replies to Circular Letter (CL) 2022/15-CF, including to remove measures that were still experimental and to differentiate among practices that could be implemented in the short-, medium-, and long-term.

After further discussion, CCCF agreed to forward the revised COP for the Prevention and Reduction of Cadmium Contamination in Cocoa Beans (CXS 56-2004) to CAC45 (2022) for final adoption at Step 8.

Maximum Levels for Lead in Certain Food Categories (Agenda Item 7)

Brazil, as Chair of the EWG, introduced the item and explained that proposals for MLs were significantly revised based on written comments submitted in reply to CL 2022/16-CF. The proposals referenced in CL 2022/16-CF and the revised proposals presented at the plenary in Conference Room Document (CRD) 26 were as follows:

Commodity	**Proposals referenced in CL 2022/16-CF**	**Revised proposals at plenary in CRD26**
Fresh eggs	0.25 mg/kg	Discontinue work
Cereal-based products for infants and young children	0.05 mg/kg	0.02 mg/kg
Ready-to-eat meals for infants and young children	0.05 mg/kg	0.02 mg/kg
Fresh culinary herbs, exc. rosemary Rosemary	0.25 mg/kg 0.5 mg/kg	Discontinue work
Dried culinary herbs	2.0 mg/kg	Continue work
Dried spices	0.4 to 3.5 mg/kg	Continue work, except for dried garlic
Sugars	Sugars, 0.1 mg/kg Honey, 0.06 mg/kg Corn/maple syrups, 0.1 mg/kg Molasses, 0.3 mg/kg	White/refined sugar, syrups, honey, 0.1 mg/kg No ML for molasses Continue work on raw and brown sugars
Sugar-based candies	Hard candy, gummies, jellies, 0.05 mg/kg	Sugar-based candies, 0.1 mg/kg, excluding candy powders

	Soft candies, 0.07 mg/kg Candy powders, 0.2 mg/kg	

The Committee had extensive discussions on the newly proposed MLs in CRD26.

- Fresh eggs. The Committee agreed to discontinue the work.
- Cereal-based products for infants and young children. The EWG Chair proposed an ML of 0.02 mg/kg. Japan, Egypt, Saudi Arabia, Uruguay, and Switzerland supported 0.02 mg/kg. The United States supported 0.02 mg/kg but stated it also could support additional work if needed to resolve questions about included samples and methodology. The International Special Dietary Foods Industries (ISDI) supported the U.S. intervention, noting that it was important that MLs be globally achievable. The International Association of Consumer Food Organizations (IACFO) did not support 0.02 mg/kg, stating that the level could be more health protective. CCCF agreed to forward an ML of 0.02 mg/kg for lead in cereal-based foods for infants and young children to CAC45(2022) for final adoption at Step 5/8 and to clarify the ML applies to product "as sold, not reconstituted, or otherwise prepared for consumption."
- Ready-to-eat meals (RTE) for infants and young children. The EWG Chair proposed an ML of 0.02 mg/kg. The United States supported interim adoption of an ML of 0.02 mg/kg at Step 5, allowing for another round of consideration by the Committee at its next session, to allow time for further review and parsing of the category to determine if certain nutritious foods, such as root vegetables, would need a higher ML. ISDI supported the intervention by the United States, saying that it would be hard to achieve an ML of 0.02 mg/kg globally and that more time was needed to review data for certain food types. The European Union supported adoption of an ML of 0.02 mg/kg for all foods based on their review of European Union data. The Committee agreed to forward the ML of 0.02 mg/kg at Step 5, and for the EWG to evaluate whether certain foods would need to be excluded before final adoption at Step 8. Chile asked if further data on some matrices would be requested, and the Secretariat agreed a Circular Letter requesting more data could be issued.
- Culinary herbs. The EWG Chair proposed adoption of MLs of 0.25 mg/kg (fresh herbs), 0.5 mg/kg (fresh rosemary), and 2.0 mg/kg (dried herbs), and/or discontinuing work on fresh herbs. There was general agreement that more data should be obtained on dried herbs. On fresh herbs, Thailand stated that fresh herbs were growing in importance in international trade and supported adoption of an ML of 0.25 - 0.3 mg/kg but excluding rosemary. The European Union supported an ML of 0.25 mg/kg for fresh herbs, but excluding oregano and thyme, as well as rosemary. The United States supported continuing the work with new data and noted that cilantro, a widely consumed fresh herb, had not been considered. CCCF agreed to return the MLs to Step 2/3 for further consideration by the EWG based on a new JECFA call for data. The United States and JECFA asked Brazil to clarify what data were still needed. In response, Brazil said Codex member countries could revise their datasets to specify if herbs were dried, as well provide additional sample data for those categories (such as fresh culinary herbs) with low sample numbers.
- Spices. CCCF agreed to discontinue work on dried garlic, given that there already is an ML for lead in fresh garlic. CCCF agreed to return the MLs for spices to Step 2/3 for further consideration by the EWG based on a new JECFA call for data.
- Sugars, honey, and syrups. The EWG Chair proposed an ML of 0.1 mg/kg for white sugars, syrups, and honey; not to establish an ML for molasses due to low sample size; and to prepare a revised proposal for raw and brown sugars for CCCF16. Turkey recommended 0.1 mg/kg for honeydew honey, 0.15 mg/kg for blossom/nectar honey, and 0.2 mg/kg for sugars based on literature surveys and existing non-Codex standards. Thailand, Morocco, Iran, Egypt, India, the United States, the European Union, and Australia supported an ML of 0.1 mg/kg for sugars and

honey. The United States requested that work on molasses continue given that molasses can be a source of lead exposure. However, Brazil said it was not proposing to collect additional data. The European Union asked that maple syrup, corn syrup, and honey be identified as the foods covered by the ML in the General Standard for Contaminants and Toxins in Food and Feed (GSCTFF). CCCF15 agreed to forward an ML of 0.1 mg/kg for lead in white sugar, honey, corn and maple syrups to CAC45(2022) for a final adoption at Step 5/8; to consider an ML for brown and raw sugars based on data available from GEMS/Food and submit a proposal for consideration by CCCF16 (2023); and to discontinue work on an ML for molasses.

- Sugar-based candies. The EWG Chair proposed an ML of 0.1 mg/kg for all sugar-based candies, a simplification from the original proposal of three candy categories. The EWG Chair also proposed not to establish an ML for candy powder, since there were data from only one country, the United States. The United States supported the proposed simplified ML of 0.1 mg/kg. However, the United States, who provided the candy powder data, supported including candy powders, as this candy type can be an important source of potential exposure to children. CCCF agreed to forward an ML of 0.1 mg/kg for sugar-based candies for final adoption at Step 5/8.

CCCF agreed to re-establish the EWG to consider MLs for RTE meals for infants and young children (excluding certain foods) and brown and raw sugars based on data currently available on GEMS/Food, for consideration by CCCF16 (2023); and MLs for culinary herbs (fresh/dried) and spices (dried) following a JECFA call for data, for consideration by CCCF17 (2024). During the plenary report review, the United States asked that the report reflect that new data would be submitted for RTE meals for infant and young children, but the Codex Secretariat and Brazil did not agree to do this, stating that it did not reflect the earlier discussion on this topic.

Methylmercury in fish (Agenda Item 8)

New Zealand, as Chair of the EWG, speaking also on behalf of co-Chair Canada, introduced the agenda item and reviewed the proposed MLs for orange roughy and pink cusk-eel, the possibility of ML development for Patagonian toothfish, and the status of the sampling plan and proposed development of risk management measures for methylmercury in fish.

After discussion, CCCF agreed to advance the MLs of 0.8 mg/kg methylmercury for orange roughy and 1.0 mg/kg methylmercury for pink cusk-eel to CAC45 (2022) for final adoption at Step 5/8. CCCF further agreed to continue work on the sampling plan, not including monetary value as a provision, and to consider the recommended sampling plan at CCCF17 (2024). The Committee also agreed to discontinue work on an ML for Patagonian toothfish, due to lack of sufficient data, and a separate guidance paper on risk management issues for methylmercury in fish.

Maximum Levels for Total Aflatoxins in Certain Cereals and Cereal-Based Products Including Foods for Infants and Young Children (Agenda Item 9)

Brazil, as Chair of the EWG, explained that CRD25 contained significantly revised proposals for MLs based on written comments submitted in reply to CL 2022/18-CF. The proposals referenced in CL 2022/18-CF and presented at the plenary in CRD25 were as follows:

Commodity	Proposals referenced in CL 2022/18-CF	Revised proposals in CRD25
Maize grain, destined for further processing	30 µg/kg	20 µg/kg
Flour, meal, semolina and flakes derived from maize	20 µg/kg	10 µg/kg

Husked rice	25 µg/kg	20 µg/kg
Polished rice	5 µg/kg	5 µg/kg
Sorghum grain, destined for further processing	15 µg/kg	10 µg/kg
Cereal-based products for infants and young children	10 µg/kg	5 µg/kg

The Committee had extensive discussions on the newly proposed MLs in CRD25.

Maize grain destined for further processing

There was extensive discussion of the proposed ML of 20 µg/kg, as reflected in CRD25, and also another new proposal of 10 µg/kg. Mexico, the United States, Ecuador, Thailand, Sudan, Argentina, Paraguay, Colombia, Indonesia, and Canada supported 20 µg/kg. The European Union, Egypt, South Africa, Uganda, Kazakhstan, Kenya, Rwanda, Switzerland, Cameroon, Singapore, Syria, and Palestine supported 10 µg/kg. The Chair asked the plenary to consider a level of 15 µg/kg as a compromise, with review in 5 years. The European Union, Ecuador, Tanzania, Mexico, Kazakhstan, Brazil, Paraguay, Chile, Switzerland, Costa Rica, and India supported this proposal. The United States proposed that the Committee instead consider a level of 20 µg/kg, with review in 3-5 years. In support of this position, the United States noted that an ML of 20 µg/kg harmonized with current standards for major exporters and importers and would be more practical to implement, while 15 µg/kg would have significant effects on trade. In addition, 20 µg/kg would better account for the year-to-year variation seen in the dataset. The United States also noted the wide range of MLs under consideration for maize grain, starting at 30 µg/kg in CX/CF 22/15/9, 20 µg/kg in CRD25, and now 15 µg/kg in plenary. Thailand, Canada, and Argentina supported the United States proposal for an ML of 20 µg/kg with a review in 5 years. Thailand stated they had concerns about exceeding a rejection rate of 5 percent and Canada cited the need to consider year-to-year variation and to have the least possible impact on food security while ensuring health protection in a fair and science-based manner. Egypt, Rwanda, Tanzania, Syria, South Africa, Ghana, and Syria reiterated their support for 10 µg/kg.

The Chair concluded CCCF would establish an ML of 15 µg/kg with a note to revisit the ML in 5 years to see if it can be lowered. The United States requested that the term "revised" be used instead of "lowered" to allow for the possibility that year-to-year variation might warrant an increase. The United States also requested that maize intended for wet milling be excluded from the ML. CCCF agreed to advance the ML for maize grain, destined for further processing, to CAC45 (2022) for final adoption at Step 5/8, with review in 5 years, noting the reservations of Rwanda, Uganda, and Kenya.

Flour, meal, semolina, and flakes derived from maize

The Chair asked the Committee to consider an ML of 10 µg/kg, as proposed in CRD25. The European Union and Egypt supported 4 µg/kg; Kazakhstan and the United Kingdom supported 5 µg/kg. Brazil supported 10 µg/kg and stated that an ML of 5 µg/kg would result in rejection rates exceeding 5 percent, and a more conservative approach was appropriate for derived products than for maize for further processing. The United States supported 10 µg/kg and suggested adding the provision to review the ML in 3-5 years. The Committee agreed to advance the ML of 10 µg/kg for flour, meal, semolina, and flakes derived from maize to CAC45(2022) for final adoption at Step 5/8, with review in 5 years, and noted the reservations of Egypt, the European Union, and Kazakhstan.

Husked rice

The Chair proposed the Committee consider the ML of 20 µg/kg, as reflected in CRD25. Thailand and the United States supported the proposed ML of 20 µg/kg. Egypt and Singapore stated they did not

support 20 µg/kg. Kenya, Tanzania, and Kazakhstan supported 10 µg/kg. The Committee agreed to advance the ML of 20 µg/kg for husked rice to CAC45(2022) for final adoption at Step 5/8 and noted the reservations of the European Union, Kazakhstan, Kenya, Singapore, Egypt, and Sudan.

Polished rice

The Committee agreed to advance the proposed ML of 5 µg/kg for polished rice to CAC45(2022) for final adoption at Step 5/8. India supported an ML of 8 µg/kg and expressed a reservation.

Sorghum grain destined for further processing

The Chair proposed that the Committee consider the ML of 10 µg/kg, as reflected in CRD25. The European Union supported 5 µg/kg and Kenya supported 10 µg/kg. The United States expressed concerns about the lack of data from countries consuming sorghum as a primary human food but supported 10 µg/kg in the spirit of compromise. The Chair asked if allowing a review in 5 years would address the data concern. The United States agreed but recommended obtaining more geographically representative data. The Committee noted this recommendation and encouraged countries, particularly those with high consumption of sorghum, to submit data. CCCF agreed to advance the proposed ML of 10 µg/kg for sorghum grain, destined for further processing, to CAC45 (2022) for final adoption at Step 5/8, with review in 5 years.

Cereal-based foods for infants and young children

The Chair proposed that CCCF consider the ML of 5 µg/kg, as reflected in CRD25. The European Union, Singapore, Kazakhstan, Egypt, the United Kingdom, Iran, Uganda, Syria, Ghana, and the Russian Federation did not support 5 µg/kg. Japan, Chile, Indonesia, and Argentina supported 5 µg/kg. The World Food Programme (WFP), seconded by UNICEF, supported 10 µg/kg, stating that lower MLs would affect their ability to supply food aid, that these products are consumed for a limited timeframe from 1-5 years, and that the Committee should consider further review or consider corn-based foods separately. The Chair questioned whether CCCF should set an ML, given many objections to an ML of 5 µg/kg. The United States proposed, and Chile supported, excluding maize-based foods, with further work on this product type in the future. The Chair proposed 5 µg/kg with review in 5 years. The European Union, Singapore, the Russian Federation, the United Kingdom, Uganda, and Iran did not support the revised proposal. Mexico, Colombia, Paraguay, Ecuador, and Costa Rica supported 5 µg/kg with review in 5 years. WFP requested exclusion of maize-based foods and the Chair proposed instead an exclusion for food aid products. The United States asked WFP if this proposal addressed their concerns, after which WFP asked if there would be two MLs, 5 and 10 µg/kg. The Chair concluded that there would be an ML of 5 µg/kg for cereal-based foods for infants and young children, and an ML of 10 µg/kg for cereal-based foods for food aid programs, which addressed WFP and UNICEF's concerns. The European Union and Egypt expressed reservations to both MLs.

Sampling plans

The EWG Chair reviewed the recommendations of a virtual working group that met prior to CCCF15, as reflected in CRD9. CCCF15 agreed with the recommendations to (1) harmonize sampling plans for aflatoxin with plans for deoxynivalenol (DON) and fumonisins, and (2) issue a call for data on (a) the typical ratio of the four aflatoxin isomers in naturally contaminated cereal samples and (b) the variation in sample collection and sampling preparation and analysis for husked rice, polished rice, and sorghum grain. Canada, supported by Japan and Kenya, agreed with alignment between sampling plans for different mycotoxins where reasonable, but noted that a larger laboratory sample size is needed for aflatoxin compared with other mycotoxins. CCCF agreed the EWG will continue work on the sampling plan for CCCF16.

Maximum Level for Total Aflatoxins in Ready-To-Eat (RTE) Peanuts and Associated Sampling Plan (Agenda Item 10)

India, as Chair of the EWG, introduced the item, and recalled that CCCF12 (2018) had agreed to hold the proposed ML of 10 µg/kg at Step 4 to ensure implementation of the COP for the Prevention and Reduction of Aflatoxin Contamination in Peanuts (CXC 55-2004). CCCF14 (2021) agreed to re-establish the EWG led by India to reconsider new/additional GEMS/Food data and to prepare revised proposal for an ML for RTE peanuts for consideration by CCCF15. India explained the work process followed in the EWG, the data analysis, and recommendations for an ML of either 10 or 12 µg/kg for aflatoxins in RTE peanuts, noting that it was not possible to segregate data into peanuts that were RTE or for further processing (FFP). India recommended applying the sampling plan for aflatoxins in peanuts intended for further processing to RTE peanuts.

The Chair requested comments on the proposed ML of either 10 or 12 µg/kg. There was extensive discussion of issues such as whether a lower ML should be set for RTE peanuts than for peanuts for further processing based on the approach taken to tree nuts in the General Standard for Contaminants and Toxins in Food and Feed (GSCTFF) or in consideration of the effects of cleaning and sorting procedures; the inability to segregate data in GEMS/Food on RTE peanuts and peanuts for further processing; the importance of consumption of peanuts especially by children; the need to take an "as low as reasonably achievable" (ALARA) approach to a genotoxic carcinogen; and the findings of regional safety assessments. The European Union supported a level lower than 10 µg/kg but agreed with concerns about the inability to segregate data on RTE peanuts and peanuts for further processing and noted that the 2019-2020 datasets were dominated by data from the European Union, with a lower ML in place. The United States stated that it did not support the proposed ML of 10 µg/kg because the rejection rate is significantly higher at 10 µg/kg than at 15 µg/kg, with a significant economic impact, but no significant reduction in dietary risk based on the JECFA83 assessment. The United States also did not support 12 µg/kg, noting there were no data or analysis presented to support this proposal. The United States recommended additional consideration of year-to-year variation and geographical variation before setting an ML, noting that the data presented for 2017-2020 showed significant varation and that the data are not globally representative, with 80 percent of 2020 data from the WHO European Region, since the European Union a limit of 4 µg/kg is in place for total aflatoxins. In addition, very few data from major peanut exporters in Africa, South America, and parts of Asia are included. The United States also highlighted additional concerns with the data analysis, including that the timeframe after implementation of the COP should be from 2018 to the current year; all relevant data should be included, including missing United States data for 2019; the analysis should consider year-to-year and national variation both before and after implementation of the COP; and data should not be presented in ranges. Further, the data from 2019-2020 do not support that implementation of the COP has occurred, due to domination of the dataset by European Union data.

Senegal stated that it supported 15 µg/kg with review in 10 years, noting that Senegal is a key exporter of peanuts, that peanuts are important for combatting malnutrition, that the rejection rates in the paper (CX/CF 22/15/10) support 15 µg/kg, and there is no health advantage for 10 µg/kg based on the JECFA83 assessment. Canada supported Senegal's intervention and proposed an alternative approach of reviewing the established ML for peanuts for further processing and the Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in Peanuts (CXC 55-2004) in the standards review work group chaired by Canada. India supported 10 µg/kg, citing an immediate trade concern and consistency with the approach taken to tree nuts, and stated that setting an ML would assist in segregating data in the future. Australia agreed with comments made on data quality and analysis by the United States and Canada and proposed future consideration of a single ML of 15 µg/kg for RTE peanuts and peanuts for further processing, consistent with Canada's proposal to review the current ML and COP in the

standards review group. China supported Canada's intervention. Rwanda, Uganda, Brazil, Syria, Chile, South Africa, Philippines, Paraguay, Tanzania, and Iran supported 10 µg/kg. The European Union, Egypt, Singapore, Kazakhstan, the United Kingdom supported levels below 10 µg/kg. Senegal, the United States, Canada, Australia, China, Sudan, and Indonesia, and the International Confectionery Association supported 15 µg/kg.

The Chair requested that an in-session working group (WG) chaired by India, and including Japan, the European Union, the United States, Brazil, Canada, Australia, and Senegal, discuss how to move forward given methodology questions. India summarized the recommendation of the WG as follows: to adopt a compromise ML in the interest of immediate trade concerns and then generate data specifically for RTE peanuts after implementation of the COP and review in 5 years. The United States noted that other options were discussed in the WG, including suspension of work and delay for one year. The Chair proposed an ML of 10 µg/kg with 5 years review. Australia, the United States, and Canada supported an ML of 15 µg/kg with 5 years review, based on the data. Brazil, Japan, and Thailand, while in principle supporting a lower ML for RTE peanuts than for peanuts for further processing, supported a delay for further data collection, given the data concerns.

The Chair subsequently proposed to continue work for one more year, nothing the opposition of India and Senegal. India agreed to chair the re-established working group with specific terms of reference. The European Union suggested review of text fields in the GEMS/Food database for terms such as "roasted," "skinned," "blanched," etc. The WHO representative, speaking for the GEMS/Food database administrator, offered assistance with data segregation. The United States proposed the following be covered in the EWG terms of reference:

- Include information on what data were included or excluded
- Include information on challenges faced in data review, such as identification of RTE peanuts versus peanuts for further processing
- Analyze data year by year and region by region, both before and after the COP
- Analyze by importer versus exporter

India asked if Senegal and the United States could co-chair. The United States declined because of other pending chair and co-chair responsibilities but enthusiastically supported Senegal co-chairing.

CCCF agreed to re-establish the EWG chaired by India and co-chaired by Senegal to prepare a new proposal for CCCF16 for an ML for total aflatoxins in RTE peanuts and an associated sampling plan, based on the sampling plan for peanuts for further processing. CCCF agreed that the EWG should carefully consider all the data, take into account all comments made at the session, and present a paper that clearly presents the data analysis for consideration by CCCF16.

Maximum Levels for Total Aflatoxins and Ochratoxin A in Nutmeg, Dried Chili and Paprika, Ginger, Pepper, and Turmeric and Associated Sampling Plans (Agenda Item 11)

India, as Chair of the EWG, introduced the item and recalled that the work had been suspended in 2018 for three years to ensure implementation of the COP for the Prevention and Reduction of Mycotoxins in Spices (CXC 78-2017) and that CCCF14 had re-established the EWG to prepare revised proposals for MLs for total aflatoxins and ochratoxin A in nutmeg, chili and paprika, ginger, pepper, and turmeric, taking into account new or additional data available in GEMS/Food. The EWG Chair explained the work process, the recommendations for MLs for selected spices or groups of spices and put forth a recommendation for a sampling plan. CCCF discussed issues such as the inability to provide comments on the document due to its late preparation, whether there should be one or multiple MLs, and whether the

ML(s) should be 10 or 20 µg/kg.

The Chair proposed forwarding the MLs for final adoption at Step 5/8. The United States proposed allowing more time to address specific questions, including what data were included and excluded in the analysis, analyzing ground versus whole spices, and analyzing data by country. Singapore, Egypt, Syria, and Brazil supported the United States proposal. India and Jamaica supported setting at least some MLs this year. The Chair proposed setting an ML of 20 ug/kg for chili and nutmeg this year and the European Union stated it would reserve its position. The Chair concluded that work would continue for another year and asked for recommendations on the proposed sampling plan, ISO 948. CCCF concluded that the proposed sampling plan was not suitable. CCCF agreed to re-establish the EWG to prepare new proposals for MLs and an associated sampling plan.

Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cassava and Cassava-Based Products (Agenda Item 12)

Nigeria, as Chair of the EWG, speaking also on behalf of co-Chair Ghana, introduced the item and noted that a revised COP incorporated comments in reply to CL 2022/21-CF and was available in CRD27. The Chair proposed interim adoption of the COP at Step 5, to allow for another round of consideration by the Committee at its next session. Thailand commented that the COP should be aimed at products for human consumption and should not include recommendations unrelated to the reduction of mycotoxins such as use in fertilizer. The United States supported Thailand's intervention and requested that work occur in the online forum to facilitate participation by EWG members. CCCF agreed to advance the COP to CAC45 (2022) for interim adoption at Step 5 and to re-establish the EWG, chaired by Nigeria and co-chaired by Ghana, to further revise the COP, taking into account the comments provided by CCCF, with a view to finalizing the COP at CCCF16 (2023).

Guidance on Data Analysis for Development of Maximum Levels and for Improved Data Collection (Agenda Item 15)

The European Union, as Chair of the EWG, introduced the item and explained that guidance was revised to consider replies to CL 2021/78-CF (October 2021) and comments made at CCCF14 (2021). Due to the late availability of the paper and because the guidance was not discussed among co-chairs and EWG members, it was presented to CCCF for information only. The EWG Chair further explained that a virtual side event was held prior to CCCF15 to discuss the workplan for next year and the structure and topics to be included in the guidance and gave a summary of key points and recommendations from the virtual side event.

CCCF agreed on the creation of three subgroups chaired by the Co-chairs to address: (1) data collection and submission and extraction of data from the GEMS/Food database, (2) data selection /clean-up and generating an overview of data (aspect of data analysis), and (3) statistical analysis (aspect of data analysis), with aspects related to data presentation to be discussed in connection with data analysis in the relevant subgroups. CCCF also agreed to hold three virtual working group meetings in 2022 (September - November) organized around the content areas for the three subgroups. CCCF re-established the EWG chaired by the European Union, co-chaired by Japan, the Netherlands and the United States, to elaborate a proposal for CCCF16.

Review of Methods of Analysis for Contaminants (Agenda Item 16)

Brazil, as chair of the EWG, speaking also on behalf of co-chairs United States and Japan, highlighted the recommendations of the EWG and a virtual WG that met prior to CCCF15. CCCF15 agreed to:

i. submit performance criteria for lead and cadmium to the Codex Committee on Methods of Analysis and Sampling (CCMAS) for inclusion in the Codex Recommended Methods of

Analysis and Sampling (CXS 234-1999)

ii. request CCMAS to revoke the General Methods for Contaminants (CXS 228-2001)

iii. request CCMAS to:
   a. remove certain analytical methods from CXS 234;
   b. transfer methods that meet established performance criteria to the column of "example of applicable methods that meet [performance] criteria";
   c. identify commodities for which methods AOAC 2015.01 and EN 15763 are applicable and include these methods as examples of methods that meet the performance criteria;
   d. identify examples of other applicable analytical methods meeting the performance criteria; and
   e. evaluate replacing existing performance criteria in CXS 234 for lead and cadmium in natural mineral waters.

Forward Work-Plan for CCCF: Review of Staple Food-Contaminant Combinations for Future Work of CCCF (Agenda Item 17)

The Host Country Secretariat, the Netherlands, introduced the item, recalling that the discussion paper on the review of staple-food contaminant combinations for future work of CCCF was developed by the Host Country, Codex, and JECFA Secretariats, and presented at CCCF14 (2021). CL 2021/87-CF requested comments on the discussion paper. The Host Country Secretariat stated that the comments received on the approach/methodology were diverse and did not give clear guidance on how to revise the discussion paper. CCCF noted that a virtual workshop would be held in 2022 to address the issues raised in reply to CL 2021/87-CF and to propose a way forward for the consideration of this item at CCCF16 (2023).

Review of Codex Standards for Contaminants (Agenda Item 18)

Canada, as Chair of the EWG, introduced the item and highlighted 10 recommendations from a virtual WG held prior to CCCF15, as reflected in CRD06. CCCF agreed to endorse the recommendations, including: (1) to create a new Overall Highest Priority List of standards for review; (2) to maintain, without further prioritization, Lists A.1, A.2 and B; (3) to agree to the proposed prioritization criteria; and (4) to continue with the general process by which the trial period (2022-2024) is proceeding.

CCCF16 agreed to the recommendations and requested the Codex Secretariat to issue a circular letter to solicit comments on the tracking list in advance of CCCF16 (2023). CCCF agreed to reconvene the WG chaired by Canada to meet prior to CCCF16 to consider the comments in reply to the circular letter and make recommendations to CCCF16.

Follow-up work to the outcomes of JECFA evaluations and FAO/WHO expert consultations (Agenda item 19)

The European Union, as Chair of the EWG, presented the recommendations made at a virtual WG held prior to CCCF15 focusing on possible follow-up actions to the outcomes of JECFA evaluations and FAO/WHO expert consultations on pyrrolizidine alkaloids, ciguatoxins, tropane alkaloid and ergot alkaloids, T-2 and HT-2 toxin, and diacetoxyscirpenol.

CCCF agreed to:

i. re-convene an EWG, chaired by the European Union, to prepare a discussion paper on possible follow-up actions for pyrrolizidine alkaloids for CCCF16;

ii. establish an EWG chaired by the United States, and co-chaired by the European Union, to prepare a discussion paper on the development of a code of practice or guidelines to prevent or avoid ciguatera poisoning, building upon the work already undertaken by FAO in collaboration with IAEA and the Intergovernmental Oceanographic Commission of the United

Nations Educational, Scientific and Cultural Organization (IOC-UNESCO);

iii. reconsider follow-up actions on tropane alkaloids at CCCF16 (2023);

iv. request JECFA to issue a call for data on the occurrence of ergot alkaloids, T-2 and HT-2 toxins, and diacetoxyscirpenol; and

v. re-convene the in-session WG at CCCF16 chaired by the European Union.

Priority list of contaminants for evaluation by JECFA (Agenda Item 20)

The United States, as Chair of the EWG, presented the updates and recommendations made at a virtual WG held prior to CCCF15. There were updates to the priority list for dioxins and dioxin-like PCBs, arsenic, and scopoletin. Trichothecenes (T-2 and HT-2) were removed from the list as the JECFA assessment was completed and published in April 2022. The EWG Chair highlighted new proposals from Members and recommendations by the WG, which included a request that the JEFCA recommendation for the establishment of MLs for sodium metabisulfite (sodium pyrosulfite) in meat/poultry products be referred to CCFA, and that a proposal for inclusion of maximum levels for cadmium in processed root vegetable juice be considered as a proposal for new work rather than for JECFA evaluation. In addition, the EWG Chair noted that, due to the lack of occurrence and toxicity information, the European Union would provide information on phomopsins in response to a circular letter to be issued by the Codex Secretariat after CCCF15, to solicit comments on the priority list for contaminants for evaluation by JECFA. No additions were made to the priority list. The EWG Chair further informed CCCF of a WHO expert consultation to reevaluate toxic equivalency factors (TEFs) for dioxin and dioxin-like PCBs scheduled for October 2022. CCCF agreed to endorse the priority list, to continue to request comments and/or information on the priority list for consideration by CCCF16, and to reconvene the in-session WG at CCCF16 chaired by the United States.

Other Business and Future Work (Agenda Item 21)

The Committee noted that no other business had been proposed.

DATE AND PLACE OF THE NEXT SESSION

CCCF16 is scheduled to convene in April 2023, with final arrangements subject to confirmation by the Host Country and the Codex Secretariat.