

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda Items 6, 11, 15, 20

CRD17

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ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

15th Session

Virtual

9-13 and 24 May 2022

Comments of the United States of America

Agenda Item 6: CX/CF 22/15/6

- The United States provides these additional technical comments in a CRD to address issues such as the following:
 - Clarify the discussion on the effect of pH on cadmium (Cd) soil concentration and uptake.
 - Clarify which chemical analytes in the soil should be monitored by farmers to prevent and reduce Cd.
 - Provide guidance regarding the timing/frequency of soil sampling when measuring Cd content.
 - Clarify who should be providing recommendations regarding zinc levels in soil.

| Section | Specific technical comments |
|--------------------------------|--|
| Introduction | |
| Para. 2 | Add "livestock manure" as a source of Cd. The statement should read, "Cdenters through anthropogenic activities such as processing ores, burning fuels, contamination with industrial waste, <u>livestock manure</u> ,..." |
| Para. 7 | Delete the phrase "(e.g., agricultural-forestry integration systems)" as integrated systems are already mentioned in the paragraph. |
| Para. 9 | It would be helpful to add a phrase at the end of the sentence to indicate the difference in timeframe of varying mitigation strategies, "...this problem, including mitigation measures that may be taken in the near term (e.g., soil testing and addition of soil amendments), while other measures will require longer time to implement (e.g., grafting of plants on rootstocks with low Cd uptake)." |
| Definitions | |
| Adsorption and Absorption | We suggest that these definitions refer specifically to Cd and cocoa. For example, "Adsorption refers to the physical or chemical attraction and retention of Cd to soil particles." "Absorption refers to the net uptake of Cd from the soil by the roots of the cacao trees." |
| Cation Exchange Capacity (CEC) | Clarify last sentence to read, "...nutrients (e.g., Mg, K and Ca) exist as cations." |

| Section | Specific technical comments |
|--|---|
| Recommended Practices to Prevent and Reduce Cd Contamination in Cocoa Beans | |
| 4.1 Contamination before planting – new plantations | |
| Para. 11 | In the third sentence, the list of parameters should only include those key parameters needed to understand what steps should be taken to prevent and reduce Cd uptake into the cocoa beans. We suggest these parameters be measured for a new plantation or when identifying the extent of a Cd problem and how to address it: pH; organic matter; bioavailable P, Cd, Zn, and Fe; and levels of exchangeable cations K, Ca, Mg, Na, Al and H. |
| Para. 14 | Add the underlined text to clarify the relationship between Cd and pH. <u>“...cadmium soil levels. A survey in Ecuador of soil Cd concentrations corresponding to specific Cd concentrations in cocoa beans found that the soil Cd should not exceed 0.4 mg Cd/kg if the soil pH=5.0, in order for the mean Cd concentration in cocoa beans to not significantly exceed 1 mg Cd/kg. When the soil pH=7.0, the Cd concentration in the soil could be higher, e.g., 1.0 mg/kg. More research is needed to extend this observation to other soils.</u> |
| Para. 18 | Revise last sentence to read, “...household <u>wastewater</u> ...” |
| Para. 19 | “Avoid <u>intermittently</u> flooded soils...” as cacao trees do not survive in flooded soils. |
| 4.2 From production to harvesting | |
| Para. 23 | Delete “(e.g., endorsed by Codex)” as Codex does not endorse soil methods. Modify last statement of paragraph to read, “These soil characterization analyses should not only include Cd but other nutrients too (<u>see paragraph 11</u>). Soil pH is the most important parameter to measure on an ongoing basis.” |
| Para. 24 | We suggest adding a statement after the first sentence of this paragraph to clarify the sampling recommendation. “Because of the natural variation in Cd and Zn levels in the soil, at least one composite soil sample (consisting of at least 20 subsamples) per hectare should be collected.” |
| Para. 26 | Clarify who is specifying the critical levels. Is this a recommendation to national authorities? |
| Para. 29 | Given the need to balance Cd and Zn, the following sentence could be added to this paragraph. “Addition of Zn sulfate through fertilization also may be needed to ensure Zn levels are maintained”. |
| Para. 40 | We suggest deleting the paragraph on <i>Streptomyces</i> as the method is experimental and its application is unclear. |
| 4.3 Post-harvest phase | |
| Para. 49 | It should be clarified whether the suggestion to use <i>Saccharomyces cerevisiae</i> is research or established practice, and what is the practical application for producers? If there are no clear practical recommendations, we suggest deleting this paragraph. |

Agenda Item 11: CX/CF 22/15/11

- The United States supports continued work in the electronic WG for CCCF16.
- The document for CCCF16 should provide information on what data are included and excluded by the EWG, whether ground or whole spices are included, and the country of origin of samples by year. If possible, ground and whole spices should be examined separately.
- Although the United States supports continued work, we potentially would not object to an ML of 20 µg/kg for AFT for chilis, nutmeg, and ginger. This would be consistent with good agricultural and manufacturing practices.
 - Based on the data presented, MLs for pepper and turmeric may not be needed, as the rejection rates are very low for MLs ranging from 20 ug/kg to 10 ug/kg (0% rejection for turmeric at all proposed MLs; 0.07%-0.41% rejection for pepper at 20, 15, and 10 µg/kg, respectively).
- The United States does not support an ML of 20 µg/kg for OTA for all spices given the high rejection rates for nutmeg and chili.
 - Based on the data presented, MLs for OTA in pepper and turmeric may not be needed, as the rejection rates are very low at 20 µg/kg (0% for turmeric and 0.6% for pepper).
- The United States does not find ISO 948 appropriate. Among other issues, it does not provide any information on total laboratory sample size. The EWG should work on developing an appropriate sample schedule for mycotoxins in spices.

Agenda Item 15: CX/CF 22/15/14

- The United States supports this work moving forward to provide assistance to EWGs developing documents for CCCF.

Agenda Item 20: REP21/CF14, Appendix VIII

- The United States submitted updates to the priority list pertaining to inorganic arsenic in response to CL 2021/88-CF.
- The United States did not submit any recommendations for addition to the priority list.