European Union comments for the

CODEX COMMITTEE ON CONTAMINANTS IN FOOD
14th Session

Virtual session, 3-7 and 13 May 2021

Agenda item 7:

Request for comments at Step 3 on the Code of practice for the prevention and reduction of cadmium contamination in cocoa beans (CX/CF 20/14/7)

(Codex Circular Letter CL 2021/12-CF)

Mixed Competence

Member States Vote

The European Union and its Member States (EUMS) welcome the work on the development of a code of practice for the prevention and reduction of cadmium contamination in cocoa by the electronic Working Group chaired by Peru and co-chaired by Ghana and Ecuador.

The EUMS support the development of the code of practice because sufficient information on mitigation measures is available for field production and post-harvest processes.

The EUMS would like to suggest the following amendments to the document:

As a general comment the EUMS propose to include via footnotes the scientific references of the studies, on which the recommended practices are based in the respective paragraphs.

-In paragraph 11 a wide range of soil parameters is listed, which need to be determined before sowing or before the establishment of a new plantation. It is proposed to focus in the code of practice only on the parameters, which are relevant for cadmium contamination.

- Paragraph 12: In view of the fact that studies show that for a soil PH of 5.0 cadmium concentrations in soil should not exceed 0.4 mg/kg cadmium, in order to avoid concentrations of more than 1 mg/kg in the cocoa beans, the first sentence of the paragraph suggesting that a cadmium concentration in the soil of 1.4 mg/kg is suitable, should be deleted.

- Paragraph 14: As it is concluded in paragraph 13 that agroforestry, compared to monoculture doesn't significantly change the cadmium concentration in cocoa beans, paragraph 14 with further recommendations for agroforestry, should be deleted.

-Paragraph 28: For the recommendation 'Levels of 3 to 4 % of organic matter in cocoa plantations decrease cadmium in cocoa beans' it should be specified to what the 3 to 4% refers, e.g. to 3 to 4% organic matter by weight of the top 5 cm of soil? It might be clearer to state the mass of organic matter, which should be applied per area.

- Paragraph 29 states that it is vital to add phosphate fertilisers because tropical soils have a limited native phosphorous content. Because also by using organic fertilisers the phosphorous content of the soil can be improved, while these fertilisers typically contain less cadmium and they show a high phosphorous bioavailability, it is proposed to rephrase the paragraph:

> '*For a successful cocoa production it is vital to supplement the soil with phosphate, because tropical soils have a very limited natural phosphate content. This can be best done via the use of organic fertilisers, which have a high phosphorous bioavailability and a low cadmium content. As phosphate fertilisers or sedimentary phosphorous rock may contain high cadmium concentrations, they should only be used when they have a demonstrated low cadmium content and they should in any case comply with cadmium limits established by national or regional competent authorities.'*

- Paragraph 31 mentions under soil amendments $MgCO_3$ and $CaSO_4$, which should rather be mentioned under paragraphs 25, 26 and 27, which deal with liming/ salts. $ZnSO_4$ should be dealt with under paragraph 24 on Zn supplementation of the soil via the addition of salts to the soil.

- Paragraph 36 on genotypes does not belong under the section of strategies to immobilise cadmium in the soil. This could be included in the chapter on actions, which can be taken when creating new plantations. When planting new plantations, it should be recommended to plant varieties of cocoa trees, which are less prone to cadmium uptake.

- Paragraphs 42, 45 and 46 deal with the fermentation step, so they should be merged.

-Paragraph 43: The EUMS request to add the scientific references on which the statements in this paragraph are based. It is not necessary to explain all the details of the study.

- Paragraph 48: a reference could be added to a very recent publication by Vanderschueren *et al.* (2020)[1] that confirms the statement that the cadmium concentrations in the edible part of the cocoa beans decrease as the fermentation proceeds, because the cadmium can be redistributed from the nib (edible part) to the testa (inedible part) during this process.

-Paragraph 49: The EUMS request to add the scientific references on which the statement in this paragraph are based.

In addition to the above comments, please find as an Annex a track-changed version with additional editorial and other comments for your consideration.

The EUMS consider that, when taking into account the re-drafting suggestions, the document could be adopted at step 5. If needed, the EUMS can agree to re-establish the electronic working group to continue developing the code of practice.

[1] Vanderschueren R, De Mesmaeker V, Mounicou S, Isaure MP, Doelsch E, et al., 2020. The impact of fermentation on the distribution of cadmium in cacao beans. Food Res Int 127:108743. Doi:101016/j.foodres.2019.108743.