

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
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World Health
Organization

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Agenda Item 13

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Tenth Session
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(Comments submitted by Egypt, Ghana, India, Kenya, Republic of Korea, Thailand, USA and African Union)

Discussion paper on the development of maximum levels for mycotoxins in spices

EGYPT

I would like to thank the electronic Working Group and inform you that Egypt supports the EWG recommendation.

GHANA

Position: We support the priority list of spices for which MLs will be established and continue to support new work on harmonization of MLs for aflatoxins and ochratoxin A in the prioritized spices for purposes of public health protection and fair practices in the international trade. We also recommend that JECFA should examine the effect of different potential MLs. Countries with occurrence data and legislated limits for aflatoxins and ochratoxin A in spices should make them available for evaluation. The outcome of this evaluation could be useful in the future work for developing MLs for aflatoxins and ochratoxin A spices.

Rationale: Based on worldwide data considered by the eWG, the spices in the priority list (Group 1: chilli and paprika, ginger, nutmeg, pepper, turmeric and Group 2: caraway, celery seed, cloves, coriander seed, garlic and fenugreek) are the most important with regards to international trade, volume of production and consumption. These spices have also recorded the highest world rejections due to mycotoxins contamination. Available data demonstrate that aflatoxins and ochratoxin A are the two most important mycotoxins of public health concern with respect to contamination of spices with mycotoxins. The wide variations in the legal limits for aflatoxins and ochratoxin A in spices amongst countries could also serve as trade barrier hence the need for harmonization of MLs.

INDIA

India proposes an ML of 30µg/kg for total aflatoxin in spices in group 1 mentioned in the discussion paper.

Rationale: Based on the study done by Dr Ramesh Bhatt and Dr Vasanthi Siriguri in India which is published in Nutrition journal (2015), "Assessing intake of spices by pattern of spice use, frequency of consumption and portion size of spices consumed from routinely prepared dishes in southern India", the intake mean for chillies, Nutmeg, Pepper and Turmeric are shown in the table below:

Spices	Daily Intake mean ± S.D (Median) (grams per day per capita basis)	Monthly Intake mean ± S.D (Median)
Chillies	2.1 ± 1.3 (1.8)	3.0 ± 1.92 (2.25)
Nutmeg	-	0.22 ± 0.19 (0.14)
Pepper (Piper spp.)	0.69 ± 0.87 (0.5)	1.07 ± 0.81 (0.72)
Turmeric	0.6 ± 0.46 (0.66)	0.73 ± 0.46 (0.6)

As per GEMS/Food Consumption Cluster Diet WHO (2006), daily intake of peanuts in shell range from 1 - 10.6 g/day and for peanuts shelled range from 0.7 - 21.8 g/day. Codex MLs for peanuts (intended for further processing) has been fixed as 15 µg/kg for Total Aflatoxins.

Since dietary intake of spices in Group 1 is found to be comparatively less than that of peanuts, the resultant dietary intake of aflatoxins through spices would also be less. Therefore, a higher ML for total Aflatoxin could be possible and hence considered accordingly. An ML of 30µg/kg could be established for total Aflatoxins in spices in Group 1 mentioned in the discussion paper.

KENYA**SPECIFIC COMMENT**

GROUP 1: Chilli,
and Paprika,
Ginger, Nutmeg,

GROUP 2:

Caraway, Celery seed, Cloves,
Coriander seed, Garlic,
Fenugreek

We are in agreement with the grouping of spices mentioned above for the purpose of setting the limits of Mycotoxin in spices to assist the Committee to understand which mycotoxins need to be addressed and the spices in which they occur. This review would also help to develop guidelines for risk assessment of these products for food safety and fair trade purposes

REPUBLIC OF KOREA

The Republic of Korea supports the priority list of spice, Group 1 and Group 2 proposed by EWG.

THAILAND

Thailand wishes to thank India as chair and the European Union and Indonesia as co-chairs of the EWG for the extensive work on the development of MLs for mycotoxins in spices. We also appreciate the opportunity to comment on this issue as followed.

We support the proposal for new work on development of MLs for mycotoxins in spices of Group 1 (Chilli and Paprika, Ginger, Nutmeg, Pepper, Turmeric) in dried or dehydrated forms. Because these spices are important in the international trade and contaminated with high concentrations of mycotoxins. Therefore, the suitable MLs should be developed in such a way to protect consumers and reduce barrier to the international trade.

We do not agree with the proposal for new work on development of MLs for mycotoxins in spices of Group 2 (Caraway, Celery seed, Cloves, Coriander seed, Garlic, Fenugreek). We believe that it is premature to start new work because there are very limited number of occurrence data and mycotoxin level are present in low concentration. Additional data should be collected.

For mycotoxin type, we are of the view that MLs should be developed for total aflatoxins and ochratoxin A only because all MLs of mycotoxin for commodities such as peanut, almonds, Brazil nuts, hazelnuts, pistachios in the GSCTFF only specify total aflatoxins but not aflatoxin B1. So, it should be consistent with the existing MLs.

USA

The United States questions the recommendation on page 2 of the discussion paper to combine individual spices into two groups, Group 1 (Chili and Paprika, Ginger, Nutmeg, Pepper, Turmeric) and Group 2 (Caraway, Celery seeds, Cloves, Coriander seed, Garlic, Fenugreek), for establishment of MLs.

We seek clarification on whether the paper is proposing establishing a single ML for each of the two groups or MLs for each individual spice within each group. The United States believes that MLs should be considered for each of the top ten individual spices identified in the Priority List of Spices, ANNEX VI, Discussion Paper on Mycotoxin Contamination in Spices (prioritization for potential work on maximum levels for mycotoxins in spices), CX/CF 15/9/15 February, using exposure estimates based on mycotoxin occurrence data and spice consumption data for each of the top 10 individual spices.

The United States would not object to developing a single ML for each of the two groups of spices if data were available to support a single ML for all spices within Group 1 and all spices within Group 2, i.e., different MLs are not warranted for individual spices within each group.

The United States recommends establishing an ML for Total Aflatoxins, rather than Total Aflatoxins and B1, for the following reasons:

- Establishing only an ML for Total Aflatoxin is sufficient because Total Aflatoxins include B1, B2, G1, and G2, and a separate ML for B1 is not necessary.
- Establishing MLs only for Total Aflatoxins is consistent with MLs only for Total Aflatoxins that have been established for other commodities, i.e., peanuts, tree nuts, and dried figs, by CCCF and the Commission.

AFRICAN UNION

Position: AU supports the priority list of spices for which MLs will be established and continue to support new works on harmonization of MLs for aflatoxins and ochratoxin A in the prioritized spices for fair practices in international trade and protection of public health. Thus, Africa countries should recommend that JECFA examine the effect of different potential MLs and those with occurrence data and legislated limits for aflatoxins and ochratoxin A in spices should make these available to the subsequent EWG and possible JECFA meetings that will evaluate and propose the MLs.

Issue & Rationale: The work on mycotoxins in spices started at CCCF 8 with submission of new work proposals by India and Indonesia for establishment of maximum limits for aflatoxin in spices and nutmeg respectively. The committee therefore set up an EWG chaired by India and co-chaired by Indonesia and EU to prepare a discussion paper for the next session on mycotoxins in spices. The paper titled "Discussion paper on mycotoxin contamination in spices (Prioritisation for potential work in Maximum levels for mycotoxins in spices) made the following recommendations:

1. The priority list comprising of chili, paprika, nutmeg, ginger, turmeric, pepper, clove, garlic, sesame seed and mustard seed.
2. The committee may consider harmonizing MLs of aflatoxin and ochratoxin A in spices for protection of health of consumer and fairness in trade practices.
3. The Committee may establish MLs for aflatoxins (for Total Aflatoxins & Aflatoxin B1) and for ochratoxins (Ochratoxin A) in spices (dried or dehydrated form).
4. That in establishing MLs for mycotoxins in spices the Committee may consider not only the effect on health but also the consequences on trade and its effects on developing economies.

Africa strongly supported the recommendations of the EWG for the following reasons:

1. Based on the worldwide data considered by the EWG, the spices in the priority list are the most important with regards to volume of production, consumption and international trade. They are also having the highest world rejection data due to mycotoxins.
2. Data on MLs of aflatoxin B₁, total aflatoxin and ochratoxin A collected from 40 countries (4 African countries inclusive) show wide variation; AFB₁ (2 – 30 ug/kg, Total aflatoxin (5 – 35ug/kg) and ochratoxin A (10 – 30 ug/kg). The MLs in the upper limits might not be protective of health and will put less premium on mycotoxin control.
3. Data gathered by the EWG including data from Africa demonstrate clearly that aflatoxins and ochratoxins are the major mycotoxins of concern in the spices in the proposed priority list.
4. Since these toxins have public health implications, establishing limits will definitely protect the health of consumers but such limits must not jeopardize international trade which will have adverse consequences on economy of developing countries particularly African Countries that export spices. It is worthy of note that according to FAOSTAT (2014) Africa ranks 2nd of the 5 continents after Asia with regards to world production of Chili (18.5%), clove (23.6%), ginger (11.2%) and sesame seed (32.4%). It also contributes between 0.4% and 4.8% of world production of garlic, mustard seed, nutmeg and pepper.

At CCCF 9, an EWG chaired by India and co-chaired by Indonesia and EU was established to prepare a discussion paper which will address the following:

1. Further clarify on which mycotoxins/spices combinations to establish MLs and provide rationale for the choices
2. Prepare a project document for establishment of MLs for mycotoxins in spices
3. Propose possible MLs to assist CCCF10 take decisions on new work

The current document has therefore provided a priority list of spices based on global occurrence and rejection due to aflatoxin and ochratoxin A contamination and importance with regards to international trade. The prioritized spices were categorized into group 1 (chilli, ginger, paprika, pepper and turmeric) and 2 (caraway, celery seed, cloves, coriander seed, fenugreek and garlic) based on volume of data collected. Group 1 had more data while members in group 2 will require more information to understand the extent of risk due to mycotoxins. The EWG also provided two project documents for new works on establishment of MLs for aflatoxins and ochratoxin A in the two groups of spices. The justifications for the new works are to harmonize MLs to ensure fair practices in international trade and protect public health.

For the same reasons we supported the recommendations of the CCCF 9 on this matter, Africa will continue to support setting of MLs because they will protect public health and ensure fairness in international trade of spices in which Africa ranks second to Asia. We will continue to support establishment of limits as long as the proposed limits are achievable in Africa and data from the Continent are considered in the setting of the limits.