CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 3 **CX/CF 14/8/3**
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Eighth Session
The Hague, The Netherlands, 31 March – 4 April 2014

MATTERS OF INTEREST ARISING FROM FAO AND WHO (INCLUDING JECFA)

This document provides information on FAO and WHO activities in the area of provision of scientific advice to Codex and Member countries, and capacity development activities, which are relevant to the work of the CCCF.

Joint Expert Committee on Food Additives (JECFA)

Following the request of the sixth session of the CCCF, the issue of exposure assessment to cadmium from cocoa and cocoa products was considered by the 77th JECFA which took place in Rome Italy on 4 – 13 June 2013.

The estimates of mean population dietary exposure to cadmium from products containing cocoa and its derivatives for the 17 new Global Environment Monitoring System – Food Contamination Monitoring and Assessment Programme (GEMS/Food) Cluster Diets ranged from 0.005 to 0.39 µg/kg bw per month, which equated to 0.02–1.6% of the provisional tolerable monthly intake (PTMI) of 25 µg/kg bw. Similar mean population cadmium dietary exposures for individual cocoa products were estimated from national data, ranging from 0.001 to 0.46 µg/kg bw per month (0.004–1.8% of the PTMI).

The potential dietary exposures to cadmium for high consumers of products containing cocoa and its derivatives in addition to cadmium derived from other foods were estimated to be 30–69% of the PTMI for adults and 96% of the PTMI for children 0.5–12 years of age. The Committee noted that this total cadmium dietary exposure for high consumers of cocoa and cocoa products was likely to be overestimated and did not consider it to be of concern.

The full report of the 77th JECFA meeting is available at http://apps.who.int/iris/bitstream/10665/98388/1/9789241209830_eng.pdf

Other pending requests for scientific advice on contaminants:

No JECFA meeting to address food contaminants has been scheduled yet for 2014. The JECFA Secretariat is exploring new ways of addressing the many requests for scientific advice, in particular for complex questions. Requests for the assessments of health effects of non dioxin-like PCBs and of Pyrrolizidine Alkaloids are currently being addressed through systematic reviews of the scientific literature undertaken by WHO Collaborating Centers, and a call for data will be published to attract data not available in the published literature. This will allow for efficient preparation of a possible short specific JECFA meeting on contaminants.

FAO/WHO project on mycotoxins in sorghum supported by the Codex Trust Fund (2012-2014)

The 6th Session of CCCF was provided with a detailed overview of the background and objectives of the FAO/WHO project on mycotoxins in sorghum (CX/CF 12/6/5 – Add.1), which is related to the ongoing discussions in the Committee on Contaminants in Foods (CCCF) on the potential need for a Maximum Level on mycotoxins in sorghum. The aim of this project is to assist countries in generating data which the CCCF may decide to submit to JECFA to carry out a detailed risk assessment, with a view to the establishment of MLs for selected mycotoxins in sorghum.

The FAO/WHO project will facilitate an assessment of the types and levels of mycotoxins in sorghum in four major sorghum producing/exporting countries. The project, which commenced in 2012, is funded by the European Commission through funds provided to the FAO/WHO Project and Fund for Enhanced Participation in Codex (Codex Trust Fund).

FAO/WHO provided a status report on the project to the 7th Session of CCCF (see CX/CF 13/7/3). This note provides an update on the progress and main activities completed since the last Session of CCCF.

- **Collection, preparation and shipment of sorghum samples**. All three rounds of sampling of sorghum at different stages in the sorghum production chain on the 2012/2013 harvests were completed in 2013 following the agreed sampling protocol and sampling collection procedures. The three main collection periods were: at harvest; immediately prior to wet season; before yearly stocks end. Samples from all rounds were prepared, packed, labelled and shipped to external laboratory for analysis according to agreed sample preparation procedures; with shipment of last rounds of samples completed by 3 January 2014.

- **Analysis of samples by the Laboratory of Food Analysis at the University of Ghent, Belgium**. The following table shows sample delivery and analysis schedule as at 21 February 2014. Analysis of all samples will be completed by end March 2014.

	Planned Delivery	Actual Delivery	Planned Number of Samples	Actual Number of Samples	Analyzed number of samples
Ethiopia	Jan./Feb 2013	3/6/13	160	160	160
	July 2013	28/08/13	160	160	160
	Sept. 2013	22/11/2013	60	60	60
Sudan	Jan./Feb 2013	5/4/13	150	150	150
	July 2013	13/09/2013	150	150	150
	Sept. 2013	3/01/14	150	150	136
Mali	Jan./Feb 2013	17/4/13	92	112	112
	July 2013	5/11/2013	102	112	112
	Sept. 2013	23/12/13	110	112	108
Burkina Faso	Jan./Feb 2013	2/4/13	130	123	123
	July 2013	12/09/2013	109	122	122
	Sept. 2013	3/01/14	109	122	94
TOTAL			***1482***	***1533***	***1474***

- **Compounds analysed.** Aflatoxins, fumonisins, ochratoxin A, Zearalenone, nivalenol, deoxynivalenol, 3-actetyl- and 15-acetyl-deoxynivalenol, neosolaniol, fusarenon-X, altenuene, diacetoxyscirpenol, alternariol, Alternariol Methylether, HT2-toxin, T2-toxin, sterigmatocystin, roquefortin-C, penicillic acid, beauvericin.
- A total of 20,908 samples have been analysed by end of February 2014 (first and second round) of which 650 showed positive results for some of the mycotoxins. Mainly aflatoxins, fumonisins, and sterigmatocystin were detected.
- **Value chains studies**. In parallel with sample collection, value chain studies are being carried out in all countries to collect information on the sorghum production systems and practices in each country. Status of value chain studies in the project countries are as follows:
    - Burkina Faso – Data collection via questionnaire finalised in 2013. Data to be entered into a database for analysis and report writing. Will be finalised by second quarter 2014.
    - Ethiopia – Data collection on-going, preliminary report on first round of data collection submitted end of 2013. Second round of data collection has begun and final report expected end March 2014.
    - Mali - Focus group surveys have been finalised. Report is being finalised and will be ready by end February 2014.
    - Sudan – Questionnaire results from stakeholders interviews analysed and report produced in 2013. Focus group scheduled for February 2014 and final report expected end April 2014.
- **Reporting, supervision & issue resolution**. Two six monthly reports by project coordinator and one interim progress reports provided in 2013. Regular follow up missions undertaken by project coordinator and FAO/WHO responsible officers to countries undertaken in 2013. Conference calls organised in July, October, December 2013, and February 2014 for supervision and oversight of timely delivery of samples for analysis and to provide feedback on issues affecting analyses.

2014 activities and deliverables. By end March 2014 analyses of all samples by Ghent lab will be completed. Protocols will be developed for data analysis at national level and these will be used by country teams to analyse country results and prepare national reports. National workshops will be organised in all project countries to report on results, next steps and possible actions to address mycotoxin contamination issues at country level. All value chain studies and reports will be finalised in 2014. National reports on data analysis and value chain studies will be compiled into a consolidated report which presents a summary of the main findings. Within countries stakeholder meetings will be used to feed back results to national authorities. A final report on the project will be made available to the 9th Session of CCCF in 2015.

As noted previously, FAO/WHO will be examining the best way to share widely the different inputs and tools developed for the project (e.g. sampling and data analysis protocols) so that other Codex member states that may have a particular interest in assessing mycotoxins in sorghum could adapt and use these as relevant.

FAO and WHO are available to provide any additional information and will keep the Committee informed of progress project implementation and outcomes.

FAO Mycotoxin Sampling Tool

FAO is regularly contacted by national food safety agencies and by other development partners for guidance on sampling plans to determine and quantify mycotoxin contamination in a range of food commodities.

As part of its technical assistance to developing countries in mycotoxin prevention and control, FAO has developed a Mycotoxin Sampling Tool (freely available at www.fstools.org/mycotoxins) which provides support in analysing performance of sampling plans, and determining the most appropriate plan to meet user's defined objectives:

- The user can evaluate the effect of varying sampling plan design parameters, such as sample size, on the performance of the sampling plan.
- Using the performance information, the user can determine the most appropriate mycotoxin sampling plan to minimise risk of misclassifying lots considering available resources.

The Tool includes a User Guide which provides step by step guidance on how to use it in 24 mycotoxin-commodity combinations.

The Mycotoxin Sampling Tool is constructed in a way to allow for inclusion of additional mycotoxin-commodity combinations as well as new functions in future versions of the tool.

FAO encourages Codex members to use the tool. Feedback on the tool can be sent at food-quality@fao.org

FAO/WHO Histamine sampling tool

Following the recommendation by the FAO/WHO joint Expert Meeting on the Public Health Risks of Histamine and other Biogenic Amines from Fish and Fishery Products (Rome on 23-27 July, 2012) on which we reported last year, FAO and WHO have developed a tool to support decision-making related to the establishment and/or use of sampling plans for detection of histamine.

The tool provides support in two main areas related to sampling for histamine:

- Designing a Sampling Plan.

  This tool function attempts to find sampling plans which meet user-defined objectives, by searching for combinations of the number of samples (n) and a concentration threshold (m).

- Analysing the performance of a Sampling Plan.

  This tool function estimates the probability of accepting lots of product tested according to a user-defined sampling plan.

The FAO/WHO histamine sampling plan tool is a free resource tool and is available at http://www.fstools.org/histamine/

Risk Analysis training tools

A series of materials to support countries in developing food safety programmes following the risk analysis framework are being developed by FAO, in collaboration with WHO. The first topics to be addressed are risk profiling, data collection and use, risk prioritisation and ranking, exposure assessment. Emphasis is given to the importance of using best available evidence to inform food safety decisions. The materials will be of specific interest to food safety decision makers, and the technical and scientific experts advising them. In addition, the materials will be of use to trainers.

Handbook on Risk Communication in food safety

FAO/WHO are finalising a handbook on Risk Communication in food safety which provides guidance on the good risk communication principles and practices and includes hands-on training materials (case-studies) for developing effective risk communication capacity across national agencies sharing responsibility in food safety. The handbook will be pre-tested during regional training workshop in Budapest that is planned for June 2014.

Requests for providing scientific advice

Both organisations continue to jointly prioritise the requests for scientific advice taking into consideration the criteria proposed by Codex as well as the requests for advice from Member Countries and the availability of resources. A description of the current requests for scientific advice posed to FAO and WHO directly by the Codex Alimentarius Commission and its subsidiary bodies as well as meetings being planned by FAO and WHO in response to requests from member countries will be presented at the next CAC. In prioritising the requests for scientific advice to be addressed, FAO and WHO continue considering the set of criteria for the prioritisation proposed by Codex (ALINORM 05/28/3, para. 75) as well as the requests of advice from Member Countries and the availability of resources.

GEMS/Food programme

GEMS/Food database is a web-based platform to allow the submission of data on food contamination from different countries and institutions and to inform the Codex Alimentarius Commission and other interested parties on the levels and trends of contaminants in food and their contribution to the total human exposure. FAO and WHO encourage Member States to submit analytical data intended to be used by Codex Committees and working groups through the GEMS/Food systems. In 2013 the GEMS/Food Programme supported the data submission for working groups on Aflatoxins (4,500 results), Arsenic (6,000 results) and lead (38,000 results). The instruction manual for data submission is available at http://www.who.int/foodsafety/chem/gems/.

More information to guide the access, extraction and analysis of data submitted to the GEMS/Food database will be presented in a conference room document.

Food Safety Early warning and Rapid Alert workshop

FAO in collaboration with WHO is planning for a workshop in the late of 2014 on Food Safety Early warning and Rapid Alert (EW-RA) Systems in East Africa. The scope of the workshop is to increase awareness among food safety authorities in East Africa on various food safety EW-RA surveillance systems for prediction and early detection of food chain hazards and risks. Preliminary gathering of information on the current EW-RA systems in Africa is initiated as well as mapping of potential regional and international technical contributors to the workshop. The workshop will also cover pragmatic first steps including the strengthening of INFOSAN focal points.