

# codex alimentarius commission



FOOD AND AGRICULTURE  
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Agenda Item 15 (f)

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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD ADDITIVES AND CONTAMINANTS

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### PROPOSED DRAFT CODE OF PRACTICE FOR SOURCE DIRECTED MEASURES TO REDUCE DIOXIN AND DIOXIN LIKE PCB CONTAMINATION OF FOODS

#### - COMMENTS AT STEP 3

The following comments have been received from: Canada, United States of America, and International Baby Food Action Network.

#### CANADA:

##### *Position*

Canada supports this Code of Practice and congratulates the Drafting Group led by Germany for its efforts in the development of this document. The current content of the document is thorough and generally greatly improved over previous drafts. Further editing of the document may be useful in ensuring that all of the points raised are clear to the reader and, with this in mind, Canada has raised a number of specific comments (please see below). In this regard, Canada would be pleased to provide any additional assistance as may be required by the Drafting Group to further develop the document.

##### *General Comment*

Consideration should be given to a consistent referencing format. References are cited using a dual system – by footnoting and by a section at the end of the document entitled “REFERENCES” which is arguably a bibliography. There may well be a need to have both but, as the document stands now, some references cited in the text are actually given in the bibliography.

##### *Specific Comments*

Canada’s detailed comments are as follows and are mainly editorial or in the nature of requesting further clarification:

Paragraph 13 – Rather than mentioning the features of specific national legislation, it is suggested that this section be revised to be more generic in its focus.

Paragraph 16, Sentence 1 – See comment #1 above. Sentence 1 should be revised to be more generic. Sentence 2 needs to be re-arranged. Canada suggests something like the following: “Milk that exceeds any nationally-established maximum limits (MLs) for dioxins and dioxin-like PCBs may not be sold within that jurisdiction. In order to prevent accumulation of dioxins and dioxin-like PCBs in adipose tissues of livestock, with further possible resultant violations of MLs established for meat and milk or their derived-products, such milk should never be fed to suckling animals.”

Paragraph 17, Sentence 1 – Suggest re-wording to something like the following: “Milk substitutes consist of..... and have refined fats.....plant origin added to them.” The next sentence is unclear as to whether it deals with MLs on the fat employed or on the finished foodstuff involved. If it deals with MLs on the fat employed, the sentence might read: “If there are MLs, guideline levels or action levels for dioxins and dioxin-like PCBs on any of the fat ingredients employed in making milk substitutes, the user should request the manufacturer’s guarantee that the product was made using ingredients that do not exceed such levels.”

Paragraph 18 – It is unclear as to whether the “fish oil and other fish products” or the feedingstuffs need to be checked. In the second sentence, should the last word be “continuously,” rather than “consequently?” Canada suggests a consolidation of these two sentences into one sentence as follows: “If intended for use in feedingstuffs, fish oil and other fish products derived from fish species originating from areas with increased contamination should be checked for dioxins and dioxin-like PCBs on a regular basis.”

Paragraph 20 – The last part of this sentence should read: “....., special attention should be paid to ensuring that there is sufficient distance between the source of the emissions and crop fields, not only on the weather side but particularly on the leeward side.”

Paragraph 22 – The word “cultures” should be “crops.”

Paragraph 23 – Would it be better to use the word “twine” in place of the word “string?”

Paragraph 24 – The last few words might better read “straw for feed and bedding.”

Paragraph 25 – In Sentence 1, to what does the word “them” refer? In Sentence 3, “hereby” should be changed to “thereby.”

Paragraph 27 – Sentence 2: delete the word “the” before “experience” and change “undue” to “unduly.” The last sentence should read: “Therefore, cognizance should be taken of any nationally-established MLs prior to the use of minerals and trace elements in feedingstuffs.”

Paragraph 29, Sentence 2 – It is not clear here whether the distributor or final user needs the assurance. If it is the user, then we suggest re-wording to the following: “As assurance to the user that these minerals do not contain minerals with critical amounts of dioxins and dioxin-like PCBs, the distributor should provide appropriate certification to this end to the user.” More importantly, the authors of the document should clarify what is meant by the phrase “critical amounts” and perhaps use alternative wording.

Paragraph 37 – Suggest re-wording as follows: “To avoid possible contamination with PCP, hay racks should not be constructed from treated wood or be preserved with wood protectants.”

Paragraph 39, Sentence 2 – Suggest re-wording as follows: “Fuels for the production of energy for use in drying processes should have a low chlorine content.”

Paragraph 40 – Sentence 2 – Say “.....especially if the products so produced show.....”

Section 1.4 – Title – Suggest Substances Added to Feeds and Food, rather than Processing Aids.

Paragraph 42 – Sentence 1 – Suggest the sentence commence “Substances added to food (e.g. spices.....”

Paragraph 43 – Sentence 1 – Suggest re-wording to be more generic as follows: “Producers of feedingstuffs should ensure that anticaking agents comply with any maximum limits, guidelines or action levels for PCBs and PCDD/PCDFs established by national authorities.”

Paragraph 44, Sentence 1 – This should be re-worded to the following: “It should be ensured that no additional contamination with dioxins and dioxin-like PCBs occurs in harvesting forage commodities.” (Question: To what does the phrase “...of either kind....” refer?).

Paragraph 47 – Sentence 2 – This sentence requires clarification.

Paragraph 52 – Last sentence – Say “indications of,” rather than “hints on.”

Paragraph 53 – The first sentence needs to be re-written in the interests of clarity. As currently written, it suggests that actual contaminations, accidents and illegal disposals are all part of a comprehensive monitoring programme.

Paragraphs 54, 55 and 56 – These paragraphs should be re-written in a more generic manner, with reference to EU Commission Directives given in footnotes as examples. Sentence 1 of Paragraph 54 should commence “Important advice concerning analytical requirements.....etc.”

**THE UNITED STATES OF AMERICA:*****General Comments***

The United States (U.S.) believes that the current proposed draft Code of Practice document provides adequate background information, however, the “Code of Practice” section of the document needs further development of specific recommended practices for reducing dioxin and dioxin-like PCBs in food.

The U.S. supports the recent addition of a separate, clearly identified “Code of Practice” section that provides substantive recommended practices that governments and national authorities can use as a guide for reducing dioxin and dioxin-like PCB contamination in foods.

Because the proposed draft Code of Practice document is meant to be used by all Codex member countries and international organizations, the U.S. recommends that all reference to specific country and/or country union regulations be omitted from the document.

The U.S. proposes that the CCFAC amend the title “Code of Practice for Source Directed Measures to Reduce Dioxin and Dioxin-like PCB Contamination of Food” by deleting “for Source Directed Measures” in order for the Code of Practice to address all avenues, such as good manufacturing practices, in addition to source directed measures for dioxin reduction.

***Specific Comments*****Background, Introduction, and Global Source Directed Measures****Paragraph 14**

Paragraph 14 states that the elimination of sources of PCDD/PCDF compounds and PCBs is an essential prerequisite for a reduction of contamination and notes these measures cannot be considered in the Code of Practice because they are not relevant for Codex work within CCFAC. The U.S. agrees that measures to reduce sources are not the responsibility of CCFAC but believes that significant sources of dioxin and dioxin-like PCB should be listed in the Code of Practice for consideration by national authorities when developing source-directed national measures for reducing dioxin and dioxin-like PCBs sources.

**Paragraphs 17, 23, 26**

The U.S. recommends that sources of dioxin and dioxin-like PCBs, as listed in paragraph 23, should be included in the Code of Practice section and should be considered by governments and national authorities for developing source-directed national measures for reducing dioxin and dioxin-like PCB levels.

**Paragraph 24**

Although information pertaining to ratification of the POP Convention is informative background information, the U.S. recommends that it not be included in the Code of Practice document.

**Paragraph 28**

Because both the preamble (Background, Introduction, and Global Source Directed Measures) and the Code of Practice sections are being considered by the 36th Session of CCFAC, the U.S. believes that governments and interested organizations should provide comments on both sections. Since the invitation for comments appears at the beginning of the document, we believe that paragraph 28 is not necessary and should be deleted.

**Proposed Draft Code of Practice for Source Directed Measures to Reduce Dioxin and Dioxin-like PCB Contamination of Foods****Paragraph 1**

The U.S. believes that sources of dioxin and dioxin-like PCBs, as listed in paragraph 23, should be included in paragraph 1 of the Code of Practice section and should be considered by governments and national authorities when developing national measures to reduce dioxin and dioxin-like PCB sources.

## Paragraph 11

Paragraph 11 states that in lactating animals, dioxin and dioxin-like PCBs are excreted partly with milk fat, and in laying birds with the eggs, however, it does not address deposition of dioxin and dioxin-like PCBs in other animal-derived foods (i.e., meat, fish, and poultry). The U.S. recommends that paragraph 11 also include references to these animal-derived foods. Further, we believe that Good Manufacturing Practices and HACCP are separate and distinct control measures and therefore recommend that the third sentence be revised to “These measures involve developing Codes of Good Agricultural Practice, Good Animal Feeding Practice, Good Manufacturing Practices and other control measures (HACCP-like principles) which are proven capable of reducing the content of dioxins and dioxin-like PCBs in feeds such as”.

## Paragraph 13

The U.S. recommends that reference to the prohibition on the use of proteins of terrestrial animal origin in feed for animals in food production due to TSE/BSE legislation of the European Union be deleted. This Code of Practice is meant for use by all Codex member countries and international organizations. We fail to understand how this measure in the EU relates to reducing dioxin levels in food.

## Paragraph 14

The second sentence in paragraph 14 is unclear. Further, the U.S. questions the value of this paragraph in this Code of Practice and recommends that this paragraph be deleted.

## Paragraph 15

Point 2 of this paragraph refers to the compliance of feedingstuffs of animal origin with safe maximum or action levels set for the product. The Codex Alimentarius has not set maximum or action levels for dioxin and dioxin-like PCBs and, therefore, we recommend that this statement be deleted.

Point 3 states that the purchaser and user of animal-based feedstuffs should keep records of procurement and product safety to prevent legal liability. The U.S. believes that legal liability is outside the scope of a Code of Practice and should be omitted from the document.

The U.S. believes that Point 4 unnecessarily singles out animal fat. We suggest the following general language: “Competent national authorities should sample and analyze, using recognized international methods, suspected feedingstuffs to verify dioxin levels. This information will determine actions needed to minimize dioxin levels and allow alternative feed ingredients to be located if necessary.”

## Paragraphs 16, 27, 35, 43

Paragraphs 16, 27, 35, and 43 state feed/feed components should not exceed the adopted maximum limits for dioxin and dioxin-like PCBs. At the 34th Session of the CCFAC, in response to comments on the Position paper on Dioxins and Dioxin-like PCBs, the Committee agreed that it would not draft maximum levels for dioxins and dioxin-like PCBs at that time. Therefore, reference to “already adopted maximum limits for dioxin and dioxin-like PCBs” is unclear. If reference to already adopted maximum limits refers to specific EU regulations, the U.S. again emphasizes that this Code of Practice document is meant for use by all Codex member countries and international organizations and that reference to specific EU regulations should be omitted.

## Paragraph 18

In the last sentence of paragraph 18, we recommend replacing the phrase “checked consequently,” which is unclear, with “monitored.”

## Paragraph 20

Paragraph 20 states “In the case of dioxins and PCBs emitting industrial enterprises in the vicinity of fields, special attention should be paid to sufficient distance to these sources on the weather side and especially leeward.” The reference to dioxin and PCB emitting industries and recommendations concerning the location of growing areas from these industries is unclear. The U.S. suggests modifying paragraph 20 as follows: “In the case of potential sources of dioxins and dioxin-like PCBs in the vicinity of fields, special attention should be paid to providing sufficient distance so that the agricultural fields are not in the emission plume deposition area.”

## Paragraphs 23, 24

The U.S. believes paragraphs 23 and 24 are overly prescriptive and impractical, and questions the scientific basis for contamination of straw with dioxins and dioxin-like PCBs from the soil (unless the soil is from a known contaminated area) or from string used for baling straw. Therefore, we recommend that these paragraphs be deleted.

## Paragraph 33

The second sentence in paragraph 33 states that the temperature at the inlet into the drying zone should not be below 350 degrees C. If this is not an international standard, we recommend that this sentence be deleted. A temperature specification does not appear to be necessary to make the point that the choice of fuel is the critical issue.

## Paragraph 40

Paragraph 40 states “Smoking and grilling can sometimes be critical processing steps for increased PCDD/PCDF content in foods, especially if the products show a very dark surface with particles of soot. This should be avoided strictly.” The U.S. questions the scientific basis for formation of dioxins from smoking and grilling foods and recommends that this paragraph be deleted.

## Paragraph 44

Paragraph 44 provides specific recommendations to specific crops (i.e., sugar beet leaves) without addressing others. For consistency, the U.S. suggests that the Code of Practice provide general recommendations for harvesting practices for commodities and omit reference to specific crops like sugar beet leaves.

## Paragraph 47

Paragraph 47 states that in non-contaminated sites, eggs of free living hens (e.g. organic farming) may have increased concentrations of PCDD/PCDF-compounds as compared to eggs of hens farmed in pens without providing explanation or recommendations for reducing PCDD/PCDF levels. The U.S. suggests that specific recommendations be included in this paragraph.

## Paragraph 48

The U.S. believes that paragraph 48 is unclear and recommends the following alternative language: “Special care should be taken with older barns as they may have building materials or water resistant varnishes containing PCBs. If they have caught fire, a thorough cleaning of soot layers with lipid soluble solvents and removal of ashes and pits of extinguishing water and flushing with fresh water should reduce the risk of high PCB levels.”

## Paragraph 50

Paragraph 50 states that “Treated wood like railroad ties should not be used as fence-posts for enclosures of free-range animals. For clarity, the U.S. suggests modifying the sentence as follows: “Wood (e.g., railroad ties) treated with chemicals, such as pentachlorophenols, should not be used for fence post for enclosures of free range animals or feed lines.”

## Paragraph 51

Paragraph 51 states that grain fractions removed during milling should not be used in feed due to contamination by airborne dioxin and dioxin-like PCBs. The U.S. suggests that grain fractions be monitored to determine if they contribute significantly to dioxin and dioxin-like PCBs levels in the feed, and if so, not be used in animal feed.

## Paragraph 52

The second and third sentences in paragraph 52 suggest that all incoming raw materials and final products need to be tested by farmers, manufacturers and operators. The U.S. believes that testing everything should not be expected or considered feasible and recommends the following alternative language for these two sentences: "Therefore, farmers, manufacturers and operators should test susceptible products from areas which are known to be contaminated with dioxins and dioxin-like PCBs at elevated levels. As analyses for dioxins are quite expensive in comparison to determination of other chemical contaminants, periodic tests should be performed to the extent feasible at least by industrial manufacturers and operators of food or feed including both incoming raw materials and final products." In addition, we recommend that the heading "2.1 Self-check by Producers" be changed to "2.1 Monitoring by Producers"

## Paragraphs 54, 55, 56

Consideration of methods of analysis of dioxins and dioxin-like PCBs is currently being addressed by the Codex Committee on Methods of Analysis and Sampling (Methods of Analysis for the Determination of Dioxins and PCBs (CX/MAS 04/11)). The U.S. suggests that this document be referenced. The U.S. again emphasizes that this Code of Practice is meant for use by all Codex member countries and international organizations and reference to specific EU regulations should be omitted from the document.

## Paragraph 58

Paragraph 58 states that analytical results should be reported as "lower bound, medium bound and upper bound" without explanation of these terms. The U.S. suggests including the following statement for clarity: "Three TEQ values should be generated for each PCDD, PCDF and dioxin-like PCB congener, reflecting assignment of zero (lower bound), half the limit of detection (LOD) (medium bound), or LOD (upper bound) values to congener non-detects."

**INTERNATIONAL BABY FOOD ACTION NETWORK (IBFAN)**

IBFAN, the International Baby Food Action Network welcomes this proposed draft. As an NGO working for sound infant feeding practices we note the effects of dioxin and dioxin-like PCB on the most vulnerable parts of the food chain, that is the unborn child and the newborn infant which are at the top of the food chain. During the prenatal period, the unborn child is exposed to the body burdens that have accumulated during the life span of the mother. Researchers in the Netherlands have shown the effects of prenatal exposure to dioxin and PCB during this window of vulnerability which is present when the foetus is developing.

*J Pediatr.* 2003 May;142(5):593-4; author reply 594.

Effects of prenatal PCB and dioxin background exposure on cognitive and motor abilities in Dutch children at school age.

Vreugdenhil HJ, Lanting CI, Mulder PG, Boersma ER, Weisglas-Kuperus N.

Division of Neonatology, Department of Pediatrics, Erasmus University and University Hospital/Sophia Children's Hospital, Rotterdam, The Netherlands.

**RESULTS:** Negative effects of prenatal PCB and dioxin exposure on cognitive and motor abilities were seen when parental and home characteristics were less optimal. These effects were not measurable in children raised in more optimal environments. **CONCLUSIONS:** Neurotoxic effects of prenatal PCB and dioxin exposure may persist into school age, resulting in subtle cognitive and motor developmental delays. More optimal intellectual stimulation provided by a more advantageous parental and home environment may counteract these effects of prenatal exposure to PCBs and dioxins on cognitive and motor abilities.

*Adv Exp Med Biol.* 2000;478:271-87.

Environmental exposure to polychlorinated biphenyls (PCBs) and dioxins. Consequences for longterm neurological and cognitive development of the child lactation.

Boersma ER, Lanting CI.

Department of Pediatrics/Obstetrics and Gynecology, University Hospital Groningen, The Netherlands.

These data give evidence that prenatal exposure to PCBs do have subtle negative effects on neurological and cognitive development of the child up to school-age. Human breast milk volume and fat content is adversely affected by the presently encountered PCB levels in W. Europe. Our studies showed evidence that breast feeding counteracts the adverse developmental effects of PCBs and dioxins.

*J Pediatr.* 1999 Jan;134(1):7-9.

Effects of environmental exposure to polychlorinated biphenyls and dioxins on cognitive abilities in Dutch children at 42 months of age.

Patandin S, Lanting CI, Mulder PG, Boersma ER, Sauer PJ, Weisglas-Kuperus N.

Department of Paediatrics, Division of Neonatology, Erasmus University and University Hospital/Sophia Children's Hospital, Rotterdam, The Netherlands.

Both lactational exposure and current exposure to PCBs and dioxins were not related to 42-month cognitive performance. **CONCLUSIONS:** In utero exposure to "background" PCB concentrations is associated with poorer cognitive functioning in preschool children. Children of mothers at the upper end of exposure are especially at risk. Therefore maternal PCB body burden should be reduced, and breast-feeding should not be discouraged.

***Monitoring of breastmilk has shown that PCB and dioxins are traceable in breastmilk.***

“Breast-fed infants are exposed to higher intakes of these compounds on a body weight basis, although for a small proportion of their lifespan. However, the consultation noted that in studies of infants, breast feeding was associated with beneficial effect, in spite of the contaminants present. The subtle effects noted in the studies were found to be associated with transplacental, rather than lactational, exposure. The consultation therefore reiterated conclusions of previous WHO meetings on the health significance of contamination of breast milk with dioxin-like compounds; namely that the current evidence does not support an alteration of WHO recommendations which promote and support breast feeding. Based on new clinical data which supports the biological plausibility of certain experimental observations, continued and enhanced effort should be directed towards identifying and controlling sources of environmental input of these substances.”

***Assessment of the health risk of dioxins: re-evaluation of the Tolerable Daily Intake (TDI)***

***WHO Consultation May 25-29 1998, Geneva, Switzerland***

***WHO European Centre for Environment and Health International Programme on Chemical Safety***

“The declining trend in the levels of PCDDs and PCDFs indicates a continuing decline of exposure of the general population as a result of emission reduction measures that have been taken in the past. It is, however, recognised that breast-fed infants are still exposed to high intakes of these compounds (on a body weight basis higher than adults), although for a small proportion of their lifespan. However, taking into account the well-proven and accepted benefits of breastfeeding for developing infants, WHO repeatedly and strongly recommended that breastfeeding be encouraged and promoted, particularly in view of the declining trend in levels of these compounds in human milk (6,7,8). The results of the current study support that recommendation.”

***Results of the third round of the WHO-coordinated exposure study on the levels of PCBs, PCDDs and PCDFs in human milk 2002***

IBFAN insists on having strong measures to reduce the contamination of food and feed with dioxin and dioxin-like PCB in order to protect the foetus and the breastfeeding infant and young child.

Therefore we propose to change the wording by deleting “However” and adding (some) wording in **Article 1.1.9.**to read:

“Source-reduction measures will take many years to show effects on the contamination levels of fish because of the long-lives of dioxins and dioxin-like PCBs in the environment and the diffuse global background contamination, **therefore no time should be lost and they should start immediately.**”

2.2. 53. add at the end to read

“The results of monitoring programmes should be made available to all interested parties **including consumers.**”

We propose to add a chapter called **Information and education** with 2 paras:

### **Information and education**

59. Governments should communicate to all parties dealing with food, feeding stuff and food and feed processing, to those engaged in harvesting, transport, storage, animal keeping and fishing, the measures of this code intended for them.

60. Manufacturers and farmers have to educate their workers on how to prevent contamination and control the implementation of these measures.

One para calling for the **ratification and application of ILO convention 184 on health and safety in agriculture** should be inserted into the proposed draft code.