European Food Safety Authority

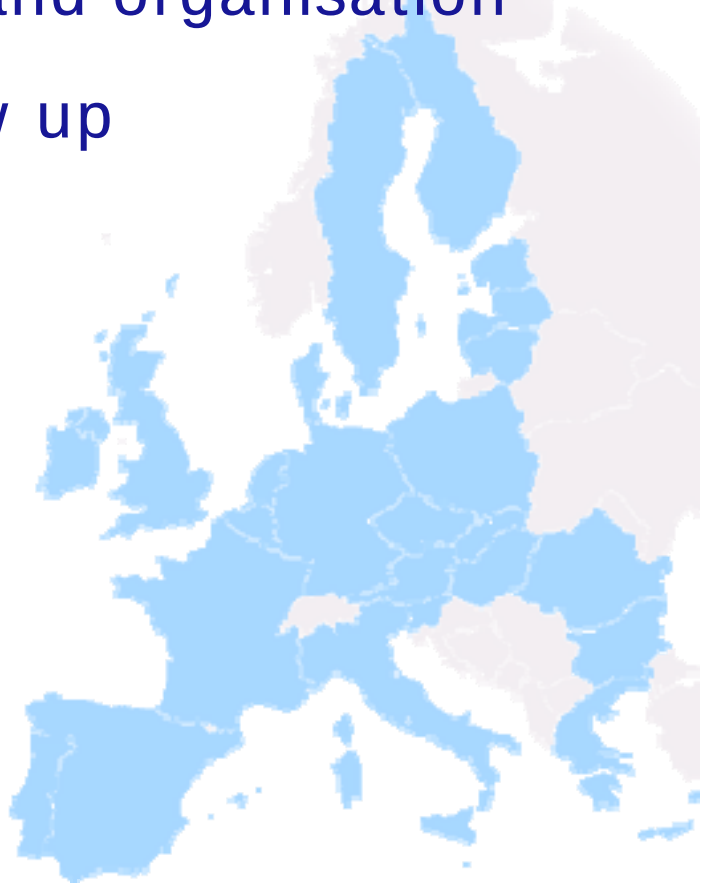
# Scientific Panel on Contaminants in the Food Chain (CONTAM)

*Address to Management Board - Parma 18 December 2008*

**Dr. Josef Schlatter, chair of CONTAM Panel**

# Outline of presentation

- CONTAM Panel – mandate and organisation
- Scientific outputs and follow up
- Work programme
- Urgent responsiveness
- Conclusions
- Challenges



# Mandate of the CONTAM Panel

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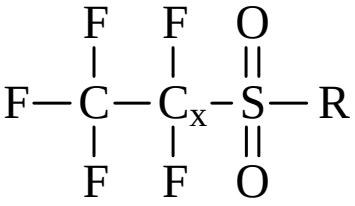
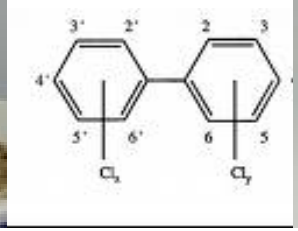
To deliver scientific opinions on contaminants in food and feed, associated areas and undesirable substances i.e. natural toxicants, mycotoxins and residues of non authorised substances not covered by another Panel.




# Work areas - I

- Chemical compounds which are not intentionally added to food and feed such as metals and metal-organic compounds, mycotoxins and persistent organic pollutants and other compounds.
- Chemical compounds naturally found in food and feed such as phycotoxins, plant toxicants, or other compounds.

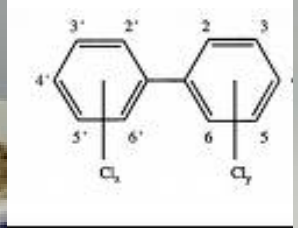


# Work areas - II

- Chemical compounds formed during thermal food and feed processing.
- Non-authorised substances in feed and food.



# Members of CONTAM Panel 2006 - 2009

- Chair: Dr. Josef Schlatter (CH)
- Vice-chairs: Prof. Dr. Johanna Fink-Gremmels (NL), Prof. Dr. Rolaf van Leeuwen (NL)
- 19 Panel members
- More information about the CONTAM experts
  http://www.efsa.europa.eu/EFSA/ScientificPanels/CONTAM/efsa_locale-1178620753812_PanelMembersContam.htm

# CONTAM Panel at work

Mandate

Panel

Working Group (WG)

Opinion adopted

WG Cadmium

WG Arsenic

WG Marine biotoxins

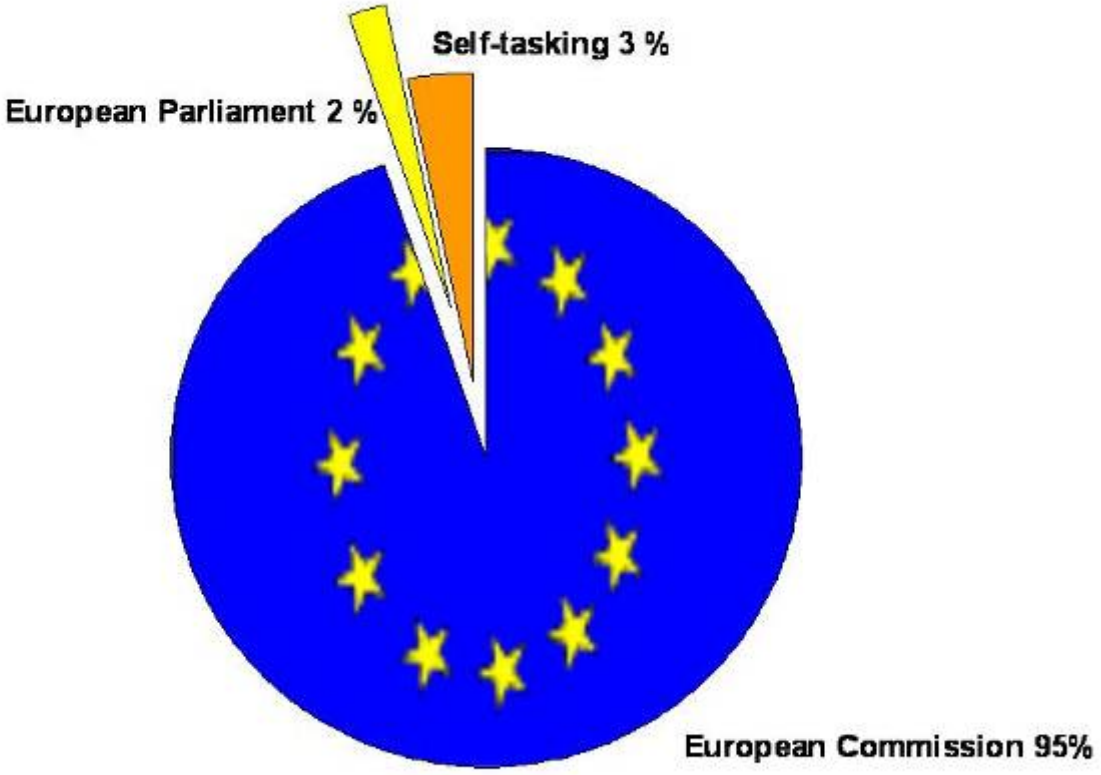
WG USAF- nitrite

WG USAF- natural plant products

DATEX Unit

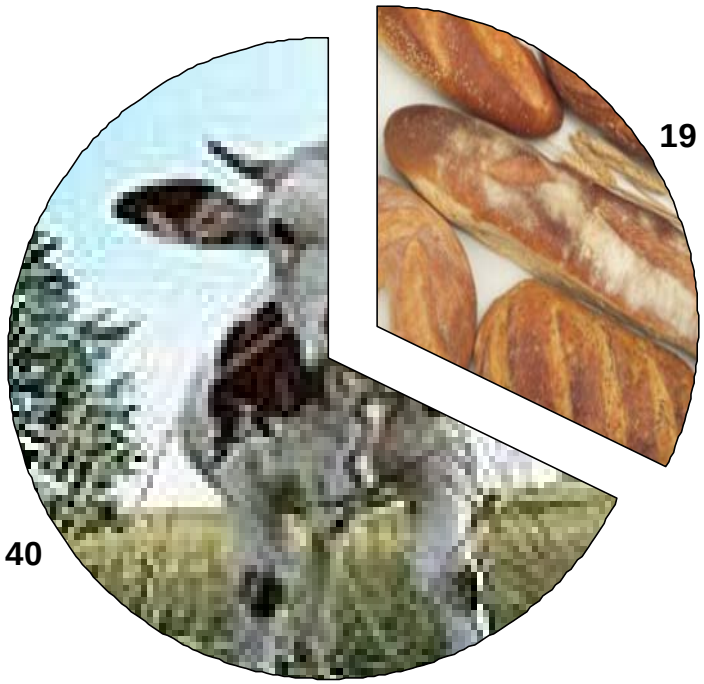
CONTAM Unit

# Requestor of opinions




**Requests mainly related to generic scientific opinions Art. 29 Regulation (EC) 178/2002**

# CONTAM: 59 scientific outputs since 2003




| | |
|---|---|
| **FOOD** | **19** |
| Metals | 2 |
| Mycotoxins | 2 |
| Persistent organic pollutants | 4 |
| Marine biotoxins | 3 |
| Food processing | 3 |
| Other | 5 |
| **FEED** | **40** |
| Metals | 5 |
| Mycotoxins | 5 |
| Persistent organic pollutants | 10 |
| Plant toxicants | 7 |
| Coccidiostats | 11 |
| Others | 2 |

# Risk management follow up of CONTAM opinions I

European Food Safety Authority

## Changes in / recommendations to EU legislation for undesirable substances in animal feed

**(Com. Directive 2002/32/EC - details see annex):**

- **Mycotoxins:** aflatoxin B1, deoxynivalenol, zearalenone, ochratoxin A, ergot alkaloids, fumonisins
- **(Heavy) metals:** lead, cadmium, mercury, fluorine
- **Persistent organic pollutants:** camphechlor, endosulfan, alpha, beta and gamma HCH, aldrin/dieldrin, endrin, hexachlorobenzene, DDT, heptachlor, chlordane
- **Plant toxicants:** cyanogenic compounds, glucosinolates, pyrrolizidine alkaloids, tropane alkaloids, theobromine, ricin
- **Unavoidable carry-over of authorised coccidiostats** into non-target feed: 11 compounds

# Risk management follow up of CONTAM opinions II

European Food Safety Authority

## EXAMPLE – Mycotoxins in food

| | |
|---|---|
| Ochratoxin A | EU legislation. Introduction of maximum levels (ML) for additional food commodities are under discussions. |
| Aflatoxins in almonds, hazelnuts and pistachios | EU legislation. Increased ML for almonds, hazelnuts and pistachios of possible 10 $\mu$ g/kg for total aflatoxins in ready to eat products are under discussions following CODEX decision. |



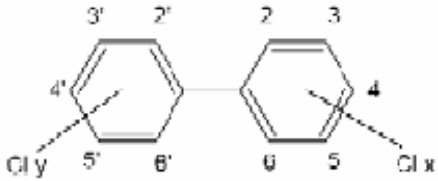


# Risk management follow up of CONTAM opinions III

European Food Safety Authority

## EXAMPLE – Others in food

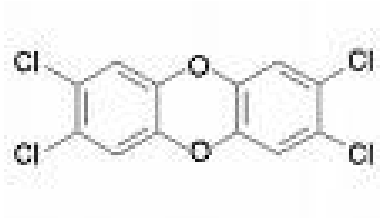
| | |
|---|---|
| Nitrate in vegetables (risk-benefit) | EU legislation. Deletion of derogation, slightly increased ML for salads, setting of ML for new food commodity (rucola) are under discussion. |
| NDL-PCBs | No EU legislation. Setting of ML for some food and feed commodities are under discussion. |
| Polycyclic aromatic hydrocarbons (PAHs) | EU legislation. Modification of legislation regarding indicator PAHs is under discussion. |
| Marine biotoxins | EU legislation. Modification of legislation under discussion. |




# EFSA Scientific Colloquia

CONTAM Panel contributed to following scientific colloquia:

- 1st colloquium: Methodologies and principles for setting tolerable intake levels for dioxins, furans and DL-PCBs
- 11th colloquium: Acrylamide carcinogenicity – new evidence in relation to dietary exposure




# CONTAM current workprogram

|  | **RA for EU-Consumers from contaminants in FOOD** | **RA for animals from contaminants in FEED and impact on human health** | **Others** |
|---|---|---|---|
| Opinions | 4 | 2 | 6 |
| Topics | **Lead**<br>**Cadmium**<br>**Arsenic**<br>**Uranium** | **Undesirable substances in animal feed:**<br>- Natural plant products **(saponins from *Madhuca* sp.)**<br>- Nitrites | **Marine biotoxins in shellfish** (saxitoxins, pectenotoxins, cyclic imines group, palytoxins, domoic acid, and emerging toxins) |

# Requests expected for 2009

## FOOD

- Aflatoxins (all nuts and aflatoxins total vs aflatoxin B1)
- Ergot alkaloids
- Morphine in poppy seeds
- Mycotoxins such as alternaria toxins

## FEED

- Mycotoxins such as T-2 and HT-2 toxin, nivalenol
- Polycyclic aromatic hydrocarbons (PAH)
- Glycerin

# EFSA's rapid responses in 2008

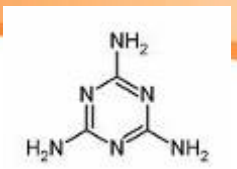
Art. 13 b of the "decision concerning the establishment and operations of the scientific committee and panels" adopted by the Management Board of EFSA on 11 September 2007 provides the basis for rapid responses.

- **Mineral oil in sunflower oil** (see annex)
- **Melamine in food**
- **Dioxin in Irish pork** (see annex)

**Statements issued by EFSA and not by the CONTAM Panel. However, some experts of the CONTAM Panel provided scientific advice to EFSA during the drafting of these statements.**

# Melamine in food

## What happened ?



- September 2008: app. 300,000 cases of infants and children suffering from kidney failure, including reported death in China. Discovery of milk powder used for infant formula that was contaminated with melamine.
- EFSA was asked by the European Commission on 19 September 2008 to provide by 24 September 2008, a scientific advice on human health risks due to possible presence of melamine in composite food imported from China into the EU.
- EFSA was asked to consider the worst case scenarios in the risk assessment.
- EFSA statement published on 25 September 2008.
- On 25 September 2008: the European Commission (EC) adopted interim measures to protect EU consumers (Decision 2008/757/EC).
- On 14 October 2008: European Commission adopts final Decision 2008/798/EC, extended on 9 December 2008.

# Dioxin in Irish pork

## What happened ?

- During routine monitoring of Irish pork, quite elevated levels of polychlorinated biphenyls (PCBs) were found in pork.
- EFSA was asked by the European Commission on 8 December 2008 to provide by 9 December 2008, a scientific advice on human health due to the contamination by dioxins in pork from Ireland.
- EFSA was asked to ask to consider pork and pork products including composite products in the risk assessment.
- EFSA statement published on 10 December 2008.
- On 10 December 2008 the European Commission proposed guidelines for the management of the incidence to protect EU consumers and a large consensus was reached on these guidelines and re-confirmed on 12 December 2008.

# Conclusions

The examples given demonstrate that:

- the scientific advice provided by the CONTAM Panel was taken-up by risk managers to protect human and animal health.
- the CONTAM Panel uses new methodologies in its risk assessment such as risk-benefit analysis and outlining uncertainties.
- EFSA can urgently react when real and potential risks to the health of European consumers occur and supports timely risk management actions.

# Challenges

- **Remaining high workload for CONTAM Panel and CONTAM unit (number of questions, often incomplete database / time-consuming data collection and data analysis)**
- **Stimulating and rewarding scientific work, but is also demanding to manage the balance between time spent for EFSA and employer**
- **Experts from many scientific disciplines needed due to the broad mandate (e.g.: … substances not covered by another Panel… and ...contaminants in food and feed, associated areas and undesirable substances …. )**

**Repopulation of new CONTAM Panel**




**Thank you very much for your attention !**

# Annex: Risk management follow up of CONTAM opinions A-I

European Food Safety Authority

**EXAMPLE – Mycotoxins as undesirable substances in animal feed**

| | |
|---|---|
| **Aflatoxin B1:** | **EU legislation. No need to change current maximum level (ML) in Com. Directive 2002/32/EC** |
| **Deoxynivalenol** | **No EU legislation. Recommended guidance values e.g. for cereals, maize products and compound feed (Com. Recommendation 2006/576/EC)** |
| **Zearalenone** | **No EU legislation. Recommended guidance values e.g. for cereals, maize products and compound feed (Com. Recommendation 2006/576/EC)** |
| **Ochratoxin A** | **No EU legislation. Recommended guidance values e.g. for cereals, cereal products and compound feed (Com. Recommendation 2006/576/EC)** |
| **Ergot alkaloids** | **EU legislation. Recommendation for increased monitoring and guidance values for combined ergot alkaloids in preparation** |
| **Fumonisins** | **No EU legislation. Recommended guidance values e.g. for maize, maize products, and compound feed (Com. Recommendation 2006/576/EC)** |

# Annex: Risk management follow up of CONTAM opinions A-II

European Food Safety Authority

**EXAMPLE – (Heavy) metals as undesirable substances in animal feed**

| | |
|---|---|
| **Lead** | **EU legislation. Reduced ML for some feed commodities and introduction of ML for additional ingredients (Com. Directive 2005/87/EC)** |
| **Cadmium** | **EU legislation. Introduction of ML for additional ingredients (Com. Directive 2005/87/EC)** |
| **Arsenic** | **EU legislation. No need to change current ML. Discussion on new ML for arsenic in trace elements. In future ML of inorganic arsenic** |
| **Mercury** | **EU legislation. Discussion on possible amendments of ML are in progress.** |
| **Fluorine** | **EU legislation. Increased ML for some feed commodities and introduction of ML for additional ingredients (Com. Directive 2005/87/EC)** |

# Annex: Risk management follow up of CONTAM opinions A-III

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**EXAMPLE – persistent organic pollutants as undesirable substances in animal feed**

| | |
|---|---|
| Camphechlor | EU legislation. Refinement of definition of ML and revisions to existing ML (Com. Directive 2005/86/EC) |
| Endosulfan | EU legislation. Introduction of ML for additional ingredients (Com. Directive 2005/77/EC) |
| Alpha, beta and gamma HCH | EU legislation. No need to change current ML. Refinement of "fat" definition in legislation (Com. Directive 2006/77/EC) |
| Aldrin – dieldrin | EU legislation. Increased ML for some feed commodities (Directive 2002/32/EC) |
| Endrin | EU legislation. No need to change current ML |
| Hexachlorobenzene | EU legislation. No need to change current ML |
| DDT | EU legislation. No need to change current ML |
| Heptachlor | EU legislation. No need to change current ML. To include metabolite in residue definition |
| Chlordane | EU legislation. No need to change current ML. To include metabolites |

# Annex: Risk management follow up of CONTAM opinions A-IV

European Food Safety Authority

**EXAMPLE – plant toxicants as undesirable substances in animal feed**

| | |
|---|---|
| **Cyanogenic compounds** | **EU legislation. Deletion of apricots and bitter almonds from list (Com. Directive 2008/76/EC). Validation of analytical methods.** |
| **Glucosinolates** | **EU legislation. Deletion of *Camelina sativa* from list (Com. Directive 2008/76/EC). Validation of analytical methods.** |
| **Pyrrolizidine alkaloids** | **EU legislation. Deletion of two *Lolium* species from list (Com. Directive 2008/76/EC). Validation of analytical methods.** |
| **Tropane alkaloids** | **EU legislation. Follow up under discussions** |
| **Theobromine** | **EU legislation. Follow up under discussions** |
| **Ricin** | **EU legislation. Follow up under discussions** |

# Annex: Risk management follow up of CONTAM opinions A-V

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**EXAMPLE – unavoidable carry-over of authorised coccidiostats into non-target feed**

| | |
|---|---|
| **11 Coccidiostats** | **3 % carry-over rate for non-sensitive non-target animal species compared to the authorised maximum concentration for feed for target animal species.**<br><br>**1% carry-over rate for sensitive non-target animal species and finishing feed compared to authorised maximum concentration for feed for target animal species.** |





# Annex: Mineral oil in sunflower oil A-VI

## What happened ?

- On 23 April 2008 the Rapid Alert System for Food and Feed (RASSF) has been notified that sunflower oil originating from Ukraine was found to be contaminated with high levels of mineral oil.
- On 28 April 2008 EFSA received request from the European Commission requesting a rapid assessment of this contamination incidence related to public health.
- On 28 April 2008 EFSA published an initial view (different from Art. 13).
- Additional data arrived to EFSA on 27 May 2008, and the initial view was updated and published.
- The Commission adopted on 23 May 2008 interim protection measures by Commission Decision 2008/388/EC and confirmed by the Decision 2008/433/EC of 10 June 2008 imposing special conditions on governing the import of sunflower oil originating in or consigned from Ukraine due to contamination risks by mineral oil.