Ongoing review of legislation on cadmium in food in the EU: Background and current state of play

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OUTLINE PRESENTATION

• Overall regulatory framework for feed and food safety legislation
• From risk assessment to risk management
• Regulatory framework for contaminants in food
• Review of EU cadmium maximum levels
  • Scientific background
  • Overall context and proposed approach as regards chocolate/cocoa products
  • Next steps and details about the reporting of data to DG SANCO

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GENERAL FOOD LAW
Scope and objectives

Applies to all stages of the production, processing and distribution of food and also of feed produced for, or fed to, food producing animals

“farm to fork” approach

Provides that food law shall pursue one or more general objectives of a high level of protection of human health and the protection of consumers’ interests and of, where appropriate, the protection of animal health and welfare, plant health and the environment

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GENERAL FOOD LAW

Risk analysis

In order to achieve the general objective of a high level of protection of human health, EU feed/food legislation shall be based on risk analysis (process consisting of three interconnected components: risk assessment-risk management-risk communication)

Risk assessment shall be based on the available scientific evidence and undertaken in an independent, objective and transparent manner

Risk assessment body in the EU: EFSA

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GENERAL FOOD LAW
Risk management

Risk management shall take into account the results of risk assessment, other factors legitimate to the matter under consideration and the precautionary principle where appropriate.

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Risk management
Contaminants – food

*Scientific risk assessment is the basis for the measures to be taken:*

- Hazard identification and characterisation (toxicological evaluation)
- Establishment of a health based guidance value, e.g. tolerable intake
- Exposure assessment: human dietary exposure (average and high level consumers). Particular attention to vulnerable groups of population.
- Risk characterisation: human exposure assessed in relation to the health based guidance value
Risk management
Contaminants – food

- Determination of foods/food groups significantly contributing to the exposure
- Occurrence data of the contaminant in the various food/food groups
- Setting a maximum level following the ALARA principle (As Low As Reasonably Achievable)
- Other appropriate management tools

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Council Regulation (EEC) 315/93 laying down Community procedures for contaminants in food

Definition: “Contaminants” means any substance not intentionally added to food which is present in such food as a result of production (…), manufacture, processing, preparation, treatment, packing, packaging, transport of holding of such food, or as a result of environmental contamination. Extraneous matter, such as, for example, insect fragments, animal hair, etc, is not covered by this definition.

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Regulation (EEC) 315/93
Provisions

General provision:
• food containing a contaminant in an amount which is unacceptable from the public health viewpoint and in particular at a toxicological level shall not be placed on the market

Good practice:
• contaminant levels shall be kept as low as can reasonably be achieved following good practices at all stages (ALARA)

When necessary for protecting public health maximum levels may be established for specific contaminants. This can also include a reference to the sampling and analysis methods to be used.

Obligatory consultation of the European Food Safety Authority (EFSA) Panel on contaminants in the food chain before provisions having effect upon public health shall be adopted.

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Maximum levels for contaminants

Commission Regulation (EC) No 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs:

- Food containing a contaminant exceeding the ML shall not be placed on the market
- Maximum level does apply to edible part if no further specification is given in the Annex
- Maximum levels are set for 14 specific agricultural and environmental contaminants
- No particular maximum levels established for cocoa and cocoa products in contaminants legislation

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Review of Reg. 1881/2006 as regards cadmium – EFSA scientific opinion 2009

- Established a lower tolerable weekly intake (TWI) of 2.5 µg/kg b.w. (previously 7 µg/kg b.w.)

- Concluded that this TWI was exceeded by certain population groups

- Recommended that exposure to cadmium should be reduced at a population level

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Review of Reg. 1881/2006 as regards cadmium – scientific background

- In 2010, JECFA assessed cadmium and derived a tolerable monthly intake (TMI) of 25 µg/kg b.w. (around 6 µg/kg b.w. calculated on a weekly basis)
- DG SANCO asked EFSA to re-assess the TWI established in 2009 in the light of the JECFA opinion
- EFSAs re-assessment (2011) confirmed the previous TWI of 2.5 µg/kg b.w. and the conclusion that cadmium exposure should be reduced
- EFSA provided a refined dietary exposure assessment in 2012 using detailed consumption data for specific age groups of the population

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Review of Reg. 1881/2006 as regards cadmium – scientific background

- Ranking of main contributors to exposure differs by age group of the population. Potatoes, cereals and vegetables are important contributors to cadmium exposure for all age groups.
- Further important contributors for children, adolescents, toddlers and adults: chocolate and cocoa products
- For infants: ready-to-eat meals, infant formulae, milk and dairy products
- For adolescents/adults: fish/seafood, meat and offal
Review of Reg. 1881/2006 as regards cadmium

Under discussion currently:

- Review of some existing maximum levels
- Introduction of some new maximum levels, e.g. chocolate and cocoa products and others
Proposed approach for chocolate and cocoa products

- Proposed maximum levels are different for different types of chocolate depending on the percentage of total dry cocoa solids—higher levels proposed for dark chocolates.
- Maximum levels also proposed for cocoa powder sold to the final consumer and as ingredient in cocoa drinks.
- Maximum levels are not proposed for the raw product (cocoa beans).
- Proposed levels are based on a comprehensive database with cadmium occurrence data collected by Member States, EFSA and industry.
Review of Reg. 1881/2006 as regards cadmium – Next steps

- Producing countries to provide occurrence data on cadmium in chocolate/cocoa products/cocoa beans to DG SANCO by 26 May 2012
- Reporting template has been provided by DG SANCO to harmonise data collection
- After receipt, data will be assessed by Commission and Member States
- Finalisation of proposal

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Review of Reg. 1881/2006 as regards cadmium – Reporting of data to DG SANCO

- Raw data points requested, no summarised statistical information
- Preferably in an Excel worksheet for easier compilation
  - Product information/description: e.g. cocoa beans, cocoa nibs, cocoa powder, chocolate
  - Date/Year of analysis
  - Origin (Country/region)
  - Cadmium (mg/kg)
  - Limit of quantification (LOQ) (mg/kg)
  - In case of chocolate: % total dry cocoa solids
  - Any other relevant information, e.g. sampling in dry or rainy season, analytical method/technique used, etc.

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Further information

**DG SANCO webpage:**
http://ec.europa.eu/food/food/chemicalsafety/contaminants/cadmium_en.htm

**EFSA opinions and reports on cadmium:**

**2009 Opinion and technical report with meta-analysis:**

**2011 Statement and scientific report:**

**2012 Scientific report with refined dietary risk assessment:**

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