

Importance of elaborating codes of practice rather than establishing maximum levels

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Outline of this presentation

1. Measures for improving food safety
2. Establishing maximum levels
3. Elaborating code of practice (COP)
4. Key points to notice for elaborating a COP
5. Dissemination of a COP
6. Verification of the effectiveness of COP

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Measures for improving food safety

- Elaborating a Code of Practice (COP)
 - Useful measures to reduce occurrence level and therefore exposure
 - Implementation of a COP makes foods safer
- Establishing maximum levels (MLs)
 - Mean contaminant levels can be reduced by removing foods exceeding MLs from market
- Dietary advice/Labeling (e.g. Methylmercury in Fish)
- Information sharing with the consumer (e.g. Acrylamide in processed foods)
- Research (providing data for risk management decision)

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Maximum levels (MLs) should be set:

- Only for contaminants presenting a significant risk to public health
- Only for foods that is significant for the total exposure of the consumer to the contaminants
- As low as reasonably achievable and at levels necessary to protect the consumer
- MLs should not be lower than a level which can be analyzed with analytical methods that can readily be set up and applied in control laboratories, unless health concern necessitates a lower MLs

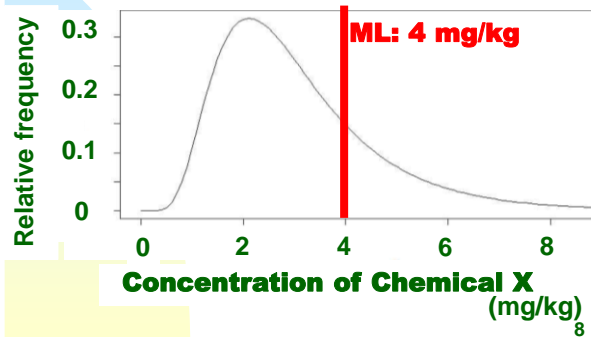
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Maximum levels should be:

- Sufficiently low to
 - Protect the health of consumers
 - Prevent “bad practice”, such as mixing the non-compliant food with the compliant food for selling (ethical problem)
- Sufficiently high to
 - Protect honest farmers/manufacturers following the “good practice”
 - Be able to be analyzed

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Example: if too low MLs are set ...



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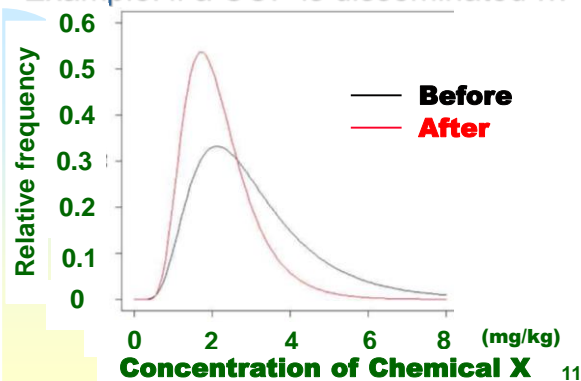
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Developing Code of Practice (COP)

- The developing a COP may be considered
 - For contaminants which may pose a human health risk as a result of a risk assessment
 - When development of an ML is not feasible or is unlikely to be effective
 - If such a COP would be supported by the available scientific evidence
- Implementation of a COP contributes to make food safer

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Example: if a COP is disseminated ...



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Key points to notice for elaborating a COP

- Good communication with industries -

- Share information regarding food safety with industries before development of surveillance plan
- Industries maintain consumer trust if mitigation measures are successfully implemented before becoming a food safety problem

➡ Advantage for industries

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Key points to notice for elaborating a COP

- Effectiveness of mitigation measures -

- Obtain information on effectiveness of mitigation measures in cooperation with industries
- Incorporation of effective mitigation measures in the factories into the COP
- Feasibility of mitigation measures should be taken into account

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Key points to notice for elaborating a COP

- Impact on the food quality -

- Consumers do not buy foods changed organoleptic properties significantly
- Industries do not accept mitigation measures which negatively affect organoleptic properties
- Sensory assessment is essential to obtain information on whether mitigation measures negatively impact on the food quality or not

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Key points to notice for elaborating a COP

- Feasibility of mitigation measures -

- Cost of implementation of mitigation measures
- Feasibility of a small and medium-sized business operators
 - Removing dark colored crisps by product color index to reduce acrylamide

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Dissemination of a COP

- Food industry should
 - Select optimum and feasible measures taken resource into consideration
 - Implement mitigation measures
- A government should
 - Cooperate with all stakeholders not only in dissemination of COP but also in collecting occurrence data
 - Share occurrence data with food business operators if a government obtains occurrence data

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Verification of the effectiveness of COP

- Essential to assess if further mitigation measure is needed or not
- Occurrence data are essential to verify the effectiveness of a COP
- Let's review previous lectures before moving on to Exercises 6

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Takeaway points

- Overview of risk analysis -

- Members
 - Base their food safety measures on Codex recommendations
 - Fully participate in Codex activities to reflect actual situation in Codex recommendations
 - Develop scientific data as much as possible
 - Can use toxicological endpoints recommended by expert bodies
 - Conduct exposure assessment for your own countries
 - Use Codex risk management measures as feasible

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Takeaway points

- Obtaining occurrence data -

- Risk manager should decide on the purpose of analysis
- Sampling plan and sampling procedure fit for a purpose should be chosen
- Samples should be analyzed with validated method
- Laboratories should comply with the general criteria in ISO/IEC 17025
- Data analysis is critical for risk management

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Takeaway points

- Obtaining food consumption data -

- Essential for estimation of dietary intake
- The raw data can be used to estimate
 - Distribution of food consumption
 - Dietary intake by specific population subgroups
- Only summary data are available, you should check
 - How the raw data are aggregated
 - How mean food consumption is calculated

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Takeaway points

- Estimation of dietary intake -

- Characteristics of point estimation
 - is simple and rapid with small data
 - does not show distribution of exposure
- Characteristics of probabilistic estimation
 - show distribution of exposure and high percentile value
 - requires large data (both occurrence and consumption), PC and software
 - obtain the more reliable estimation

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Utilization of occurrence data

- Government -

- Establishment of maximum levels (MLs)
 - Estimation of dietary intake
 - Verification of the effectiveness of a COP
- ↓
- If a COP is insufficient, government should consider further mitigation measures such as
 - Establishment of MLs, indicative value
 - Obligation of implementing mitigation measure by food industry
 - If further scientific evidence would be necessary, a research project should be commissioned

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Utilization of occurrence data

- Food industry -

- Food industry can set indicative values on a voluntary basis
- Food business operators find out if their products contain relatively high level of a contaminant in industry or not
- If some products contain extremely high level of a contaminant, the government supports companies to encourage implementation of mitigation measures

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Thank you for your attention !

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