

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
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**Agenda Item 3**

**CX/FH 00/3  
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## **JOINT FAO/WHO FOOD STANDARDS PROGRAMME**

### **CODEX COMMITTEE ON FOOD HYGIENE**

#### **Thirty-third Session**

**Washington DC, U.S.A., 23 –28 October 2000**

#### **REPORT OF THE AD HOC EXPERT CONSULTATION ON RISK ASSESSMENT OF MICROBIOLOGICAL HAZARDS IN FOOD AND RELATED MATTERS**

#### **Background**

At its last session (32<sup>nd</sup>) the Codex Committee on Food Hygiene (CCFH) identified a list of pathogen-commodity combinations that require expert risk assessment advice. In response, FAO and WHO, jointly launched a programme of work with the objective of providing expert advice on risk assessment of microbiological hazards in foods to their Member countries and to the Codex Alimentarius Commission. This involved the implementation of a number of activities including the establishment of expert drafting groups to examine three of the pathogen-commodity combinations identified as priority issues by the CCFH, holding a workshop on hazard characterization and convening a joint expert consultation on microbiological risk assessment in July 2000.

Over a six month period, the expert drafting groups prepared in-depth technical documents on exposure assessment and hazard characterisation of *Salmonella* spp in broilers and eggs and *Listeria monocytogenes* in ready-to-eat foods. These comprehensive scientific documents provide an up to date review of the state of the science of the above mentioned subjects and identify current gaps in the data that need to be filled. These documents are available on the FAO/WHO websites indicated below.

Draft guidelines for hazard characterization of pathogens in food and water were prepared during a WHO/FAO/RIVM Workshop on this subject that recently took place in Bilthoven, the Netherlands. These draft guidelines were reviewed at the joint expert consultation and proposals for their further technical development were made. The draft guidelines document has been posted on the FAO and WHO webpages for information and review purposes and FAO and WHO have invited all interested parties to submit comments to them on this document.

A Joint FAO/WHO Expert Consultation on Risk Assessment of Microbiological Hazards in Foods was held in Rome, Italy from 17 to 21 July 2000. The Consultation provided scientific advice on the risk assessment of *Salmonella* spp. in broilers and eggs and *Listeria monocytogenes*

in ready-to-eat foods; reviewed the practical guidelines and methodology for hazard characterization of microbial pathogens; and further identified the knowledge gaps and information requirements needed to complete the above-mentioned risk assessments.

The Consultation reviewed and evaluated the above-mentioned technical documents prepared and presented by expert drafting groups. It concluded that those documents considerably advanced the general development of hazard characterization and exposure assessments, and also enhanced specific knowledge in relation to the pathogen-commodity combinations identified as significant food safety problems by the CCFH. In the absence of specific risk management guidance from the CCFH, the consultation endorsed the approach taken by the expert drafting groups in developing hazard characterizations and exposure assessments for the above pathogen-commodity combinations. However, the Consultation noted that they were not tailored to achieve specified risk management goals. Although a tailored approach is preferred, the comprehensive approach taken does advance international understanding in a broad sense and provides a strong platform for future provision of microbiological risk assessment advice as requested by FAO/WHO Member Countries, the CCFH, and other stakeholders.

### **Future FAO/WHO Activities on Microbiological Risk Assessment**

During the next year FAO and WHO will continue their work on microbiological risk assessment. This will include coordinating the revision of the pathogen commodity reports on the first three steps of risk assessment (hazard identification, exposure assessment, and hazard characterization) taking into account the outcome of discussions which will take place at the 33<sup>rd</sup> Session of the Codex Committee on Food Hygiene and the information arising from the call for comments and scientific data. The final step (risk characterization) will integrate the 3 previous steps to obtain a risk estimate; providing a qualitative or quantitative estimate of the likelihood and severity of adverse effects which could occur in a given population (CAC/GL-30-1999). The *ad hoc* Joint Expert Meetings on Microbiological Risk Assessment will meet in 2001 to review and finalize the above three risk assessment reports.

Input from the CCFH and Member governments is critically important at this stage in further defining the direction of the reports. The CCFH should consider how it intends to use the information, the measures considered at the national or international level to reduce the level of illness, the population that would be affected by those measures, and the nature of the standards, guidelines, and recommendations that may result from the completed risk assessments.

The completed risk assessments may provide a framework for comparison of interventions for the reduction of foodborne illness, if the interventions and target populations are well defined. The models developed may allow comparison of estimates for the relative reduction in illness likely to be achieved through various interventions. The cost of interventions can be estimated and compared if the information needed for cost estimates is available.

### **Issues to be considered by the CCFH**

Governments and interested international organizations are invited to review the report and be ready to deliberate at the 33<sup>rd</sup> Session of the CCFH with their views on the following:

- The specific direction of work that meets the CCFH needs. In considering this it would be useful if the CCFH identified the nature and form of outcomes:
  - A list of risk reduction measures that CCFH would consider and wishes to compare in relation to relative efficacy, and cost-benefit for the three pathogen commodity groups.

- Risk management questions to be addressed in the future work on risk characterization.
  - The target population of the risk estimate to be developed in the risk characterization step (this is highly dependent on the previous item-measures that CCFH would consider).
  - Suggestions on how better to access data collected by governments and industry on rates of foodborne illness, the number of pathogens present in foods, and per capita consumption data on foods at the national level.
- In continuing their work on microbiological risk assessment FAO and WHO are proposing to initiate new activities relating to risk assessment of *Vibrio parahaemolyticus* in shell fish and *Campylobacter jejuni* in broilers, which were identified as priority issues by the 32<sup>nd</sup> Session of the CCFH. In relation to this the view of the CCFH is sought on the following:
    - The risk management questions that should be addressed.
    - The risk reduction measures that should be evaluated in these risk assessments.

In preparing proposals on both current and future risk assessment work, Member governments are expected to consult all interested parties about the existence of appropriate data collected by governments and industry and are invited to make suggestions on how better to access such data especially on rates of foodborne illness, the number of pathogens present in foods, and per capita consumption data for these foods. Member governments and interested international organizations are invited to confirm their willingness to submit data to FAO and WHO and indicate the expected date of submission.

Copies of the report will be distributed through the Codex Contact Points and the report is available in English on the WHO Food Safety Programme web site

<http://www.who.int/fsf/mbriskassess/index.htm>

and the FAO web site

<http://www.fao.org/WAICENT/FAOINFO/ECONOMIC/ESN/pagerisk/riskpage.htm>

As soon as French and Spanish versions of the report are available they will be posted on the above web sites.

The technical documents on hazard characterization and exposure assessment referred to in the consultation report are also available on these websites. However, if you experience any problems accessing these documents please contact one of the following people for assistance:

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