

**For discussion  
on 30 November 2001**

**LegCo Panel on Food Safety and Environmental Hygiene**

**RISK ASSESSMENT STUDIES ON FOOD AND  
FOOD SURVEILLANCE PROGRAMME**

**PURPOSE**

This paper briefs Members on the risk assessment studies on food and food surveillance programme conducted by Food and Environmental Hygiene Department (FEHD).

**BACKGROUND**

2. The food safety control framework in Hong Kong consists of several main components, namely food safety legislation, safety control of imported food, food surveillance, risk assessment, safety control of live food animals, management of food incidents and risk communication. The Public Health and Municipal Services Ordinance (Cap. 132) stipulates that all food on sale must be wholesome, unadulterated and fit for human consumption. Moreover, there is a set of subsidiary regulations stipulating the standards for specific food products. As part of the overall food safety control strategy, a food surveillance programme has been put in place for conformity checks on food products against prescribed standards or criteria, and so that food safety risks can be identified. Risk assessment provides the scientific basis for the food surveillance programme by carrying out systematic reviews on the surveillance results.

## **THE FOOD SURVEILLANCE PROGRAMME**

3. Food surveillance involves the ongoing collection, analysis and interpretation of data on food hazards. It serves two specific objectives –

- (a) To assess whether food on sale is fit for human consumption – food samples are taken and tested in order to protect public health against unsafe food; and
- (b) To ascertain whether prepackaged food is properly labelled – inspections are carried out to ensure that food labels comply with the labelling requirements prescribed in law and that the information given is truthful and accurate.

4. Under the food surveillance programme, food samples are collected at import, manufacture, wholesale and retail stages of the food supply chain. At present, priority is given to sampling the following food categories –

- (a) food with specific standards stipulated in the law;
- (b) food connected with previous food poisoning or other food safety incidents;
- (c) food manufactured by or sold in previously convicted food premises; and
- (d) food under complaint by the public, or food of public concern.

5. Sampling priority is under constant review, taking into account latest overseas and local risk analyses.

6. Chemical, microbiological and/or radioactivity analyses are conducted on food samples based on their inherent risks. Composition analyses are also carried out on prepackaged food to assess the truthfulness of the labels. While Government Laboratory is responsible for chemical, radioactivity and composition analyses, microbiological analyses are

carried out by Institute of Pathology of Department of Health.

## **RISK-BASED FOOD SAFETY CONTROL**

7. It would be ideal for a food safety monitoring programme to cover all food commodities and food hazards combinations so as to provide the public with complete certainty about the safety of food available in the market. However, in reality, it is not practicable nor cost effective to do so because it is not feasible for the food authority to pre-test every food item before they are put out for sale in the market. Adopting a risk-based approach in designing a food surveillance programme is more sensible and more able to meet practical needs of trade and food consumption habits. This approach is also in line with international practices. It enables us to allocate the resources of the programme efficiently based on risk assessment. With emergence of new foodborne pathogens and greater community awareness of the impact of food hazards on public health, we review regularly the strategy, quantity and food types in our food surveillance programme to meet changing needs.

8. Risk assessment forms the basis of risk communication and management in a risk-based food safety control model. Typical risk assessment consists of the following four components:

- (a) hazard identification : the identification of known or potential health effects associated with a particular biological, chemical or physical agent in food.
- (b) hazard characterization : the qualitative and/or quantitative evaluation of the nature of the adverse effects associated with a particular biological, chemical or physical agent in food.
- (c) exposure assessment : the qualitative and/or quantitative evaluation of the degree of intake of the above health-affecting agents likely to occur.
- (d) risk characterization : integration of the above three components into an estimation of the adverse effects likely to occur in a

population.

Based on the above risk assessment principles, hazards associated with food or food ingredients are evaluated and their potential risks to the population are assessed. Effective measures can then be devised to minimize or reduce the risk. While food safety control is always best carried out at source and at the food production level, the effective implementation of measures at different control points require the co-operation and support of the trade and ultimately the consumers.

## **RISK ASSESSMENT STUDIES**

9. With the establishment of FEHD in 2000, a dedicated team comprising medical professionals and food scientists has been set up within the department for carrying out risk assessment studies. The results of these studies give deeper insight in the interpretation of food surveillance results, and provide the scientific basis for prioritizing food safety issues of public health concern.

10. Since 2000, we have carried out seven topical risk assessment studies, using surveillance results, on several types of high risk/seasonal food. In addition, a series of papers called Risk-in-briefs have been published, providing consumers with information on food safety risks of topical concern. The list of risk assessment studies conducted and “Risk-in-brief” published in the past two years is shown at Annex I. We widely publicized results of these assessments through holding press conferences and distributing publicity materials directly to the trade, stakeholders and the press with a view to informing consumers of the associated risk factors, and advising them the ways to reduce the risks. The results of these assessment studies and the Risk-in-briefs are posted at FEHD’s website [<http://www.info.gov.hk/fehd>]. The website also serves as an effective channel for providing the consumers with handy and easily comprehensible tips on food safety, in a series entitled Food Safety Express (Annex II).

## **CONCLUDING REMARKS**

11. Food safety control is a tripartite responsibility among the Government, the trade and the consumers. With the collaborated efforts of the three parties, we are confident that the people of Hong Kong will be able to enjoy food of the highest possible level of hygienic and safety standard.

Food and Environmental Hygiene Department  
November 2001

**Risk Assessment Studies**

- Microbiological Quality of Ice-cream
- Microbiological Risk Assessment on Siu-mei and Lo-mei
- Aflatoxin in Foods
- Sandwiches
- Moon Cakes
- Sushi & Sashimi
- Use of Preservatives and Colouring Matter in Chinese New Year Foods

**Risk-in-brief**

- Dioxin in Foods
- Bovine Spongiform Encephalopathy (BSE) (Mad Cow Disease)
- Hepatitis A Virus in Shellfish
- Safety of Flavoured Ice Beverage
- Use of Sulphur Dioxide in Fresh Meat
- Clenbuterol in Pork and Pig Offal
- Use of Boric Acid in Rice Dumpling

**Food Safety Express**

- Choose Your Coral Reel Fish Carefully
- Microbiological Risk Assessment - Sushi and Sashimi
- Consume Fresh Jin Zhen Safely
- Provision of Safe School Meals
- Food Safety Bulletin (for consumers)
- Food Safety Bulletin (for trade)
- E.coli O157 : H7 Infection
- Understand the Date Marking of Prepackaged Foods
- Eight Safety Tips on Cholera
- Provision and Consumption of Safe Chaozhou food
- Norwalk-like Viruses - Foodborne Pathogen You Should Know
- Safety Tips on Fresh Water Hairy Crabs
- "Seasonal Food Safety Tips" Series -
  - (I) Seven Tips to Enjoy Glutinous Rice Dumplings Safely
  - (II) Food Safety Tips to Choose Cold Dishes in Summer
  - (III) How to Choose and Consume Moon Cakes Safely
  - (IV) Enjoy Hotpot Food safely