For Discussion
on 5 February 2013

LegCo Panel on Food Safety and Environmental Hygiene

Report on the Food Surveillance Programme for 2012

Purpose

This paper briefs Members on the Food Surveillance Programme of the Centre for Food Safety (CFS) in 2012 and reports on the major surveillance results for the period and the follow-up actions taken.

Food Surveillance Programme

2. CFS adopts the World Health Organization's "from farm to table" strategy when working to ensure food safety in Hong Kong. Control at source includes allowing only food from approved farms/ processing plants to enter Hong Kong, and requiring health certificates for certain food animals and food products, etc. At the downstream end of the food supply chain, the food surveillance programme is a key component of our measures to ensure food safety.

3. CFS' Food Surveillance Programme monitors food on sale to ensure its compliance with legal requirements and fitness for human consumption. CFS takes food samples at the import, wholesale and retail levels and adopts a risk-based approach in determining the types of samples to be collected, the frequency and number of samples taken for testing, and the types of laboratory analysis to be conducted. The sampling programme is under regular review, taking into account factors such as past food surveillance results, local and overseas food incidents as well as relevant risk analysis. CFS will consult the Expert Committee on Food Safety (the Expert Committee) on food surveillance projects under the Programme, which will be implemented only after they have been endorsed by the Expert Committee.

4. The three-pronged food surveillance strategy consists of routine food surveillance, targeted food surveillance and seasonal food surveillance. In addition, CFS also conducts surveys on popular food items to assess the safety of food that is commonly consumed in Hong Kong. In 2012, CFS

completed 11 targeted food surveillance projects, five seasonal food surveillance projects and two surveys on popular food items. Details of these projects are set out in the **Annex**.

Announcement Mechanism

5. CFS releases a monthly Food Safety Report that summarises all surveillance results of the previous month. If test results indicate that a food sample poses threats to or has immediate impact on public health, CFS will issue press releases immediately to explain the risks involved and advise the public against consuming the food concerned.

6. The results of targeted food surveillance projects and surveys on popular food items are released upon completion, while the results of seasonal food surveillance projects are announced ahead of the relevant festivals and seasons to enable consumers to make informed choices.

7. Apart from press releases, the food surveillance results are also uploaded onto CFS' website. Advice will be given to consumers on measures to minimise health risks posed by problem food.

Overall Results

8. Apart from radiation testing of samples of imported food from Japan[1], CFS conducted tests on a total of about 65 000 samples in 2012, i.e. about nine samples per 1 000 persons of the population of Hong Kong. This is a relatively high testing rate when compared with other overseas economies.

9. There were 132 unsatisfactory samples among these test results (please see **Table 1**). The overall satisfaction rate was 99.8%. The scores for certain testing parameters and food items were 100%. For instance, the results of testing on popular foods (including sushi and sashimi, sandwiches and salads), the microbiological analysis of lunch boxes and refrigerated pre-packaged boxed meal, as well as some seasonal food (including mooncakes, rice dumplings, hairy crabs and Poon Choi) were all satisfactory.

[1] See item VIII below for details.

Table 1: Major problems of unsatisfactory samples

Food group	Number of unsatisfactory samples	Major problems (number of unsatisfactory samples)
Vegetables, fruits and related products	19	Metallic contamination(11), preservatives(3), pathogens(3), pesticides(2)
Meat, poultry and related products	28	Sulphur dioxide in fresh meat(23), pathogens(4), preservatives(1)
Aquatic products	20	Metallic contamination(9), veterinary drug residues(5), toxins(5), pathogens(1)
Milk, milk products and frozen confections	42	Hygienic indicators(24), nutrients(17), preservatives(1)
Others	23	preservatives(7), pathogens(7), plasticisers(3), PAHs(3), colouring matters(1), hygienic indicators(1), antioxidants(1)
Total	**132**	

10. Most of the unsatisfactory samples did not involve serious problems and would not cause adverse health effects to the general public. Cases of greater concern are given below.

I. Sulphur dioxide (a preservative) in meat

11. In 2012, CFS sustained its surveillance on the use of sulphur dioxide in meat and collected more than 920 beef, pork and mutton samples from fresh provision shops and market meat stalls for testing. Among them, 23 fresh meat samples were found to contain sulphur dioxide.

12. Warning letters were immediately issued to the traders concerned. Blitz inspection on stalls with conviction records were carried out. Follow-up samples were also taken to monitor improvements. Prosecutions have been taken against four cases with sufficient evidence. Three cases were convicted and fined while the ruling for the remaining case is pending.

II. Excessive metallic contaminant in vegetables and aquatic products

13. Last year, CFS detected 11 samples of vegetables (e.g. spinach, baby spinach and shiitake mushroom, etc.) and 9 aquatic products (e.g. green wrasse, tuna and swordfish, etc.) with cadmium or mercury levels exceeding the legal limits during routine food surveillance. Long-term exposure to metallic contaminants that exceed safety levels may cause damage to organs, particularly among vulnerable groups such as fetuses and young children.

14. For those unsatisfactory samples with identified sources, CFS has notified the authorities of the exporting countries for follow-up and requested the vendors concerned to stop selling and to dispose of the affected vegetables and aquatic products. CFS would step up sampling to ensure food safety if the vendors concerned have imported or sold similar products again.

15. Newspapers reported earlier that farmers in Jinshan Village, Panyu District of Guangzhou made fertilizer out of garbage, arousing concerns about vegetables being contaminated with heavy metal residues. CFS immediately contacted the Mainland authorities for more information. Currently there is only one registered vegetable farm in Panyu district, which is not situated in Jinshan Village. In connection with the inspection conducted last year to this registered vegetable farm, test results of heavy metal content in soil, irrigation water and vegetables met the standards of both Hong Kong and the Mainland. The Mainland authorities have also inspected the registered vegetable farm in Panyu District and found no indication of garbage-derived fertilizers for vegetables. Fertilizers used in this farm are sourced from qualified suppliers. However, to allay public concerns, CFS has enhanced surveillance on vegetables from the Mainland for testing of heavy metal residues.

16. Under the current administrative arrangements between Hong Kong and the Mainland authorities, all vegetables supplied to Hong Kong must come from registered vegetable farms and production and processing establishments under the supervision of the relevant Entry-Exit Inspection and Quarantine Bureau. The "Administrative Measures on the Quarantine of the Vegetables Supplied to Hong Kong and Macao" (the Measures) that came into effect on 1 November 2009 have laid down clear registration requirements on conditions, vetting period, management system of the establishments, etc. The Measures have made significant contributions in ensuring the safety of vegetables imported from the Mainland by strengthening the supervision and control at source in respect of vegetable farms and production and processing establishments that supply vegetables

to Hong Kong, improving the product tracing system, introducing an electronic supervision system, and increasing penalties for non-compliance. Vegetable farms and production and processing establishments are respectively required to establish and maintain a record system for vegetable production and purchase and inspection of raw materials. The record keeping period must not be less than two years. Production and processing establishments must affix labels on the packaging for transport and sale of their vegetables supplied to Hong Kong to facilitate source tracing. Under the Measures, penalties for illegal conduct have been increased. Vegetable farms and production and processing establishments will be fined or even disqualified from being eligible to supply vegetables to Hong Kong upon violation of relevant inspection and quarantine requirements.

17. To prevent supply of vegetables from unknown sources to Hong Kong, every consignment of vegetables has to come with a set of accompanying documents and the transporting vehicles should bear seals. The inspection and quarantine authorities would conduct random inspection and testing of vegetables at the border so that only consignments that come with intact seals and satisfy the inspection requirement are allowed to enter Hong Kong.

18. At present, all fresh vegetables entering Hong Kong via the land route must be imported through Man Kam To. Our officers will inspect the vehicles when they arrive at the Man Kam To Food Control Office (MKTFCO). They will conduct random check to see if the seal on the vehicle remains intact and whether the consignment tallies with the accompanying documents, inspect the vegetables and take samples for tests when necessary. CFS will keep in close contact and collaboration with the Mainland authorities and the trade to exchange intelligence. At present, some 260 to 280 vegetable vehicles enter Hong Kong via Man Kam To per day from the Mainland. In 2012, about 28 890 vegetable vehicles were inspected at Man Kam To. There was no report of cases involving vegetable sources that did not tally with the accompanying documents. CFS would detain any consignment from unknown sources or consignment that did not tally with its accompanying documents. If the test result of a vegetable sample is found to be unsatisfactory, CFS would destroy the vegetable consignment concerned and inform the relevant Mainland authorities for investigation and follow-up actions. Information about the identity of the vegetable farm and production and processing establishment concerned, as well as the vegetable vehicle involved will also be recorded to facilitate detention of their next vegetable consignment supplied to Hong Kong.

III. Hygiene indicators for imported milk products and frozen confections

19. CFS has been taking samples of milk products and frozen confections at the import level for testing. In particular, milk products and frozen confections imported into Hong Kong for the first time have to be detained for testing and will only be allowed into the market for sale after passing the tests. During such operations in 2012, CFS found a total of 18 samples from four consignments of imported milk products and frozen confections with hygiene indicators (total bacterial count, coliform organisms or colony count) exceeding the legal standards of Hong Kong. All these consignments were either sealed and disposed of or returned to the countries of origin without entering the local market.

20. CFS has notified the authorities of the exporting countries for follow-up. The products in question have been suspended from import into Hong Kong until CFS is satisfied with the reports of the importers or manufacturers on remedial actions.

IV. Excessive preservatives in food

21. Apart from the 23 fresh meat samples found to contain sulphur dioxide as mentioned in paragraph 11 above, another 12 food samples were found to contain non-permitted or excessive preservatives, involving illegal use of sorbic acid and benzoic acid and excessive use of sulphur dioxide, nitrite and butylated hydroxytoluene.

22. CFS has taken enforcement actions to dispose of the affected food. The vendors concerned were reminded to procure food ingredients from reliable sources and to ensure that the food meets requirement of local regulations.

V. Veterinary drug residues in meat and aquatic products

23. A total of five samples of aquatic products were found containing non-permitted or excessive veterinary drug residues in 2012. Of these, four fish samples were found to contain malachite green, while one frozen shrimp sample was found containing residues of nitrofuran metabolite.

24. CFS had taken enforcement actions to dispose of the problem food. The traders concerned were reminded to procure food ingredients from reliable sources and to ensure that the food meets requirements of local regulations. CFS will continue to monitor veterinary drug residues in meat and aquatic products by taking samples for analysis.

25. It was reported earlier that a chicken farm in Shandong had fed chicken with prohibited antibiotics and hormones to enhance their growth. These "fast-growth chickens" were supplied to restaurant chains in the Mainland. As the fast food corporations in question have branches in Hong Kong, CFS immediately contacted the Mainland authorities to find out if these frozen chicken meat had been supplied to Hong Kong. The Mainland authorities confirmed that none of these frozen chickens had been delivered to Hong Kong, and that the farm concerned was not a registered farm for supplying poultry to Hong Kong. CFS will continue to monitor the situation and take appropriate measures to ensure that chickens supplied to Hong Kong are safe and hygienic.

26. For all poultry supplied to Hong Kong, the State General Administration of Quality Supervision, Inspection and Quarantine requires that they must come from farms and processing plants registered with the relevant Entry-Exit Inspection and Quarantine Bureau. The Food and Environmental Hygiene Department (FEHD) will conduct inspection of these farms and processing plants to check on their mode of production, management system, hygiene standard and quarantine measures. Furthermore, FEHD officers at the border inspection station will inspect the live, chilled and frozen poultry consignment importing into Hong Kong. They will verify and collect the accompanying Animal Health Certificates for the imported poultry consignments and take samples when necessary for testing of, among others, antibiotics and synthetic hormones to ensure that the poultry products are fit for consumption.

VI. Test on nutrient content of infant formula

27. CFS has begun test on the energy level and nutritional composition set by the Codex Alimentarius Commission (Codex) in infant formulae[2] available in the local market since May 2012 and it was completed by the end of the year. Seven products were found to have a low level of iodine content. Risk assessment findings revealed that when infants are fed according to the feeding amount recommended by the manufacturer as printed on the label, even after taking into account the iodine content in tap water, the iodine intake of infants solely fed the formula concerned could be less than one-third of the World Health Organization's (WHO) recommended value of 15 micrograms per kilogram of body weight per day. This may affect the functioning of the thyroid gland. If normal thyroid function is significantly affected, there may be potential impact on

[2] Infant formula is defined as formula products for infants before complementary feeding is introduced. Complementary feeding is normally introduced at 6 months of age.

the brain development of infants. Moreover, three kinds of infant formulae were detected to contain biotin at too low a level. According to the risk assessment findings, if infants are fed according to the feeding amount printed on the labels of the infant formulae concerned, the biotin intake of the infants will be less than the value recommended by the WHO, i.e. five micrograms per day. If infants between zero and six months old rely solely on the product for intake of biotin, adverse health effects cannot be ruled out. The protein and potassium content of an infant formula was found exceeding the standards of the Codex. Excessive intake of potassium and protein may increase the renal load of infants, posing a health risk to them as their kidney function is not fully developed.

28. CFS has issued press releases to announce the testing results and advise the public to stop feeding infants with the formula products concerned. CFS has also instructed the trade to stop selling the products and contacted authorities concerned for follow-up. The importers concerned have voluntarily recalled the affected products.

29. CFS has begun tests on the energy level and nutritional composition of follow-up formula products intended for young children under the age of 36 months. The tests are expected to be completed in mid-2013. In the mean time, to better protect the health of infants and young children, we have expedited our work in formulating legislative proposals relating to formula products and foods for infants and young children. We embarked on a two-month public consultation exercise in November 2012. Subject to the views received, we plan to enact the relevant legislation in 2013. A suitable grace period will be allowed before implementing the proposed legislation.

VII. Ensuring the safety of cooking oil in local market

30. CFS has all along been monitoring the quality of cooking oil in Hong Kong, in the interest of ensuring that the products comply with the legal requirements and are fit for human consumption. From January 2011 to October 2012, more than 310 cooking oil samples were tested for different chemicals, which include erucic acid, colouring matter, mycotoxins, antioxidants and metallic contaminants, etc. under the Food Surveillance Programme. All the samples taken were found to be satisfactory and in compliance with the legal requirements.

31. Since 2011, there has been media coverage from time to time on

the supply of "gutter oil"[3] for use in restaurants in the Mainland. CFS has been keeping a close watch over such reports and communicating with the relevant Mainland authority. As far as we understand it, the Mainland monitoring authority is still working on methods for identifying "gutter oil". Nevertheless, CFS carried out a targeted surveillance project on used cooking oil under the Food Surveillance Programme in 2012. A total of 68 samples of used cooking oil were collected from various local restaurants and tested for Benzo[a]pyrene (BaP) and other chemicals. The results of all samples taken were satisfactory. They had been announced in November 2012.

32. The Administration is fully aware of the public concerns that arise from a media report in December 2012 on supply of suspected substandard cooking oil. CFS has taken immediate action by taking samples from the said supplier. Three samples of the same brand and same batch were found to contain BaP at levels ranging from 14 to 17 mcg/kg, exceeding the limits set by both the Mainland (10 mcg/kg) and EU (2 mcg/kg). Based on risk assessment, CFS considers that the health risk concern for consuming the above mentioned vegetable oil should not be high. As a prudent measure, CFS has immediately announced the results to the public and the trade, and the supplier concerned has also stopped selling and recalled the product. CFS has taken more samples of cooking oil from various distributors, supermarkets and restaurants, etc., and tested them for BaP. The relevant information has been disseminated to the public and the trade immediately. We have successfully traced the source and distribution of the substandard cooking oil. The more than a month long investigation so far showed no evidence that any so-called "gutter oil" was involved.

33. On top of the existing legislation, enforcement action and food surveillance programme, FEHD has decided to take a series of extra measures to ensure the safety of cooking oil. On food surveillance, CFS is conducting an additional targeted food surveillance project on cooking oil. Samples have been taken from different stages in the food supply chain (covering importers, manufacturers, distributors, wholesalers, retailers and restaurants) and tested for BaP, metallic contaminant and aflatoxin, for the purpose of ensuring that the products available in the local market are fit for human consumption and in compliance with the legal requirements in Hong Kong. The project is expected to be completed by February 2013. The results will be announced once available.

34. Furthermore, CFS, after consulting the Expert Committee on

[3] There is no definition of "gutter oil". Generally, it refers to discarded oil recovered from gutters and ditches.

Food Safety on the surveillance strategies, has adopted an action level of 10 mcg/kg for BaP in cooking oil. If a BaP level at 20 mcg/kg is detected in cooking oil, risk assessment indicates a public health concern and in that case CFS would take enforcement action in accordance with Section 54 of the Public Health and Municipal Services Ordinance (Cap. 132)[4] as well as initiate a mandatory recall of the cooking oil concerned. When a BaP level higher than 10 mcg/kg but lower than 20 mcg/kg is detected in cooking oil, risk assessment suggests that the public health concern is low. Nevertheless, under such a scenario, CFS may still take enforcement action in accordance with Section 52 of the Public Health and Municipal Services Ordinance (Cap. 132)[5].

VIII. Radiation testing on food imported from Japan

35. In response to the Fukushima nuclear power plant incident in Japan in 2011, the Director of Food and Environmental Hygiene (DFEH) issued an order under Section 78B of the Public Health and Municipal Services Ordinance (Cap. 132) to prohibit import of certain fresh produce, milk, milk beverages and milk powder from five affected prefectures (Fukushima, Ibaraki, Tochigi, Chiba and Gunma) of Japan. Targeted radiation testing on food imported from Japan has been carried out since then.

36. More than 50 000 samples of food imported from Japan were tested in 2012. The test results of all samples had been satisfactory. All surveillance results are uploaded onto CFS' website every working day. Of these, 41 samples (including 19 tea bags, 14 tea leaves, 7 tea powders and 1 oatmeal) were detected with low radioactivity levels not exceeding the guideline levels of the Codex, which would not pose any adverse health effects. Despite that, most traders had voluntarily surrendered the related food consignments for disposal or removed the food concerned from the market place.

IX. Others

37. CFS has also strengthened surveillance in response to public concerns on other food incidents and reports, such as the suspected use of

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[4] Section 54 of the Ordinance stipulates that all food (including cooking oil) for sale must be fit for human consumption.

[5] Section 52 of the Ordinance provides that if any person sells to the prejudice of a purchaser any food (including cooking oil) which is not of the nature, or not of the substance, or not of the quality, of the food demanded by the purchaser, he shall be guilty of an offence.

non-permitted pesticides in vegetables and apples in the Mainland, soya sauce made with industrial salt, and instant noodles from Korea containing the carcinogen BaP, etc. CFS has taken immediate risk management measures, including liaising with the relevant authorities for more details and further information, conducting sales check to determine whether or not the affected products were sold in Hong Kong and taking relevant food samples from the local market for testing. The results were found satisfactory in all cases.

Conclusions

38. The Food Surveillance Programme implemented by CFS in 2012 reveals that the overall satisfaction rate of the food sold in Hong Kong remains at a high level, which is comparable to that of recent years. For individual food products with problems identified, CFS had taken prompt and effective risk management actions to safeguard public health.

39. In addition, according to the Food Safety Ordinance (the Ordinance) (Cap. 612) that came into full operation in February 2012, any person who carries on a food importation or distribution business without registration, or fails to comply with the record-keeping requirements commits an offence. The Ordinance has been implemented smoothly so far. As at the end of December 2012, about 6 938 registration applications have been received, among which 6 713 have been registered under the Ordinance, including 5 300 food importers and 4 900 food distributors. The Ordinance has facilitated CFS in tracing affected products quickly, thus helping to eliminate food safety risks.

Advice Sought

40. Members are invited to note and comment on the Food Surveillance Programme implemented by CFS in 2012.

Food and Health Bureau
Food and Environmental Hygiene Department
Centre for Food Safety

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Annex

Projects under the 2012 Food Surveillance Programme

(A) Routine Food Surveillance

It covered major food groups such as fruits and vegetables, meat, poultry, aquatic products, milk and cereals. CFS adopted a risk-based approach in taking samples for chemical and microbiological analyses.

(B) Targeted Food Surveillance

(i) Sulphur dioxide in meat (2 phases)
(ii) Microbiological quality of lunch boxes
(iii) Microbiological quality of refrigerated pre-packaged boxed meal that required reheating before consumption
(iv) Microbiological quality of ice-cream and frozen confections
(v) Microbiological quality of Chinese cold dishes
(vi) Microbiological quality of bottled water
(vii) Sudan dyes in eggs and egg products
(viii) Nitrate and nitrite in meat, meat products and cheese
(ix) Preservatives in preserved fruits and vegetables
(x) Used oil

(C) Seasonal Food Surveillance

(i) Lunar New Year food
(ii) Rice dumplings
(iii) Mooncakes
(iv) Hairy crabs
(v) Microbiological quality of Poon Choi

(D) Survey on Popular Food Items

(i) Sushi and sashimi
(ii) Sandwiches and salads