

**For discussion
on 19 November 2013**

**Legislative Council
Panel on Food Safety and Environmental Hygiene**

Prevention and Control of Avian Influenza

INTRODUCTION

This paper briefs Members on the prevailing preventive and control measures of avian influenza (AI) adopted by the Administration, including the enhanced measures taken to deal with H7N9 AI since the outbreak in the Mainland in April 2013.

PREVAILING MEASURES AGAINST AI

2. H5N1 highly pathogenic AI (HPAI) viruses have been circulating in Southeast Asia and detected in Hong Kong in poultry and/or wild birds almost every year from 1997. Since the first AI outbreak hit Hong Kong in 1997, the Administration has implemented a series of preventive and control measures at the farm, wholesale, retail and import levels. The risk of AI outbreaks in Hong Kong has since been kept under control. There has been no locally acquired case of human infection with H5N1 viruses in Hong Kong since 1997.

3. The preventive and control measures that have been put in place in relation to poultry over the years were summarised in the paper submitted to the Panel on 16 April 2013 (LC Paper No. CB(2)944/12-13(03)), and are recapitulated as follows –

(a) **surveillance and monitoring –**

Comprehensive surveillance and monitoring are put in place at all levels of the live poultry supply chain (including farms, the wholesale poultry market, retail outlets and the import level), pet bird shops, recreational parks and the wild bird environment including wild bird parks to ensure early detection of abnormalities;

(b) **maintaining the operational landscape of the live poultry trade –**

To reduce the likelihood of human contact with live poultry, the Government introduced a voluntary surrender scheme and a buyout scheme for poultry retailers, wholesalers, transporters and farmers in 2004 and 2008 respectively. As a result, the number of retail outlets reduced from over 800 prior to the introduction of the first voluntary surrender scheme to 132 at present, wholesalers down from 87 to 23, and poultry farms from 192 to 30. The total licensed rearing capacity of poultry farms in Hong Kong has also been reduced from 3.9 million in 2004 to about 1.3 million at present. This has contributed to containing the chicken population in Hong Kong at a steady level;

(c) **mandatory vaccination programme for chickens –**

In 2003, a mandatory vaccination programme was introduced, under which all chickens in local chicken farms must be vaccinated against H5 AI virus. An agreement has also been reached with the Mainland to vaccinate all chickens in registered Mainland farms for export to Hong Kong starting from 2004. Moreover, we have been closely monitoring the development of up-to-date vaccines for timely introduction to both local and imported live chickens;

(d) **regulation of local farms including the enforcement of biosecurity measures –**

In view of possible transmission of H5N1 virus from wild birds and migratory birds to local poultry, all local farms are required to install bird-proof facilities. Local farms are also required to place sentinel chickens (i.e. unvaccinated chickens) in each batch of vaccinated chickens for the purpose of detecting infection. Through monitoring the health conditions of the sentinels together with testing on both antibody level and any shedding of AI virus of vaccinated and sentinel chickens, we keep the effectiveness of the vaccine in protecting the chickens under regular review;

(e) **ban on the keeping of backyard poultry –**

In 2006, amendments were made to the relevant legislation to prohibit the keeping of poultry at backyards of domestic households. Since then, the Agriculture, Fisheries and Conservation Department (AFCD) and the Environmental Protection Department have been carrying out enforcement actions to ensure that no illegal backyard poultry are kept;

(f) **stringent hygiene requirements and inspection in the wholesale market and retail outlets –**

Thorough cleansing and disinfection of the venue, transport cages and vehicles are required of the wholesalers, transporters and retailers. Inspection or additional cleansing would be conducted by the venue management where necessary. Faecal, environmental swab and drinking water samples are also collected from the wholesale market and retail outlets for AI testing;

(g) **segregation policy –**

As waterfowls (e.g. ducks and geese) are natural carriers of AI viruses, they are prohibited from sale in live form in retail outlets since 1998 to prevent the mixing of different types of AI viruses which may result in reassortment into deadly viruses. In addition, quails are prohibited from sale at retail markets;

(h) **prohibition of overnight stocking of live poultry at all retail outlets –**

Since 2008, the Government has introduced a ban on overnight stocking of live poultry at retail outlets, requiring that all live poultry at market stalls and fresh provision shops with permission to sell live chickens must be slaughtered by the end of their daily operation;

(i) **import control –**

All imported poultry from the Mainland must be sourced from registered farms recognised by the Mainland authorities. These farms are subject to regular inspections by the relevant entry-exit inspection and quarantine authorities and the Food

and Environmental Hygiene Department (FEHD) to ensure compliance with the prescribed AI control requirements. A health certificate must accompany each consignment of imported poultry. Other import control measures include inspection of every consignment of imported poultry, AI testing on imported poultry, dead and sick bird monitoring and random screening tests of infection as appropriate;

(j) **combating smuggling of live poultry or raw poultry meat –**

Joint-departmental operations are conducted to combat the smuggling of live poultry or raw poultry meat across the boundary; and

(k) **Zonal Approach Policy –**

In 2008, we agreed with the Mainland authorities the adoption of a zonal approach policy to institutionalise the suspension of import of live poultry and poultry products from Guangdong Province if there is any confirmed HPAI outbreak in the province.¹ For provinces outside Guangdong where there is no export of live poultry to Hong Kong, we have agreed with the Mainland authorities in September 2012 that similar suspension arrangement would be adopted if there is any HPAI poultry outbreak in these provinces.

4. Moreover, in relation to human infection of AI, the Department of Health maintains vigilance and will continue its effective strategies of real-time surveillance, rapid intervention and risk communication.

¹ Having regard to the overall effectiveness of the various HPAI preventive measures that had been put in place in recent years, and in the light of the guidelines on the control of HPAI issued by the Food and Agriculture Organization (FAO) of the United Nations in 2006 and the World Organization for Animal Health (OIE) in 2007, the Administration has developed a zonal approach policy to control the import of live poultry and poultry products (chilled and frozen poultry, and fresh poultry eggs) in dealing with different scenarios of HPAI outbreak in Guangdong Province. In brief, we would suspend the import of live poultry and poultry products from registered farms and processing plants located within a certain zone surrounding the index farm where an HPAI outbreak has occurred. The zonal approach serves as a general guideline on the import suspension measures to be adopted by the Administration during the outbreak of HPAI in the Mainland. When determining the suspension measure in each individual case of outbreak, we would have to take into account all relevant factors including for example the severity in the spread of the virus, the number of farms involved and poultry infected. More details can be found in the paper submitted to the Panel on 8 April 2008 (LC Paper No. CB(2)1488/07-08(01)).

5. With the above preventive and control measures in place, the AI risks have been largely kept at a manageable level as evidenced by the absence of any locally acquired case² of human infection with H5N1 viruses in Hong Kong since 1997. Besides, the local poultry population has not experienced any H5N1 AI outbreaks until December 2008 when infection was detected in chickens in a local chicken farm in Yuen Long. In December 2011, there was one chicken carcass, of unknown origin, found in the Cheung Sha Wan Temporary Wholesale Poultry Market that was tested positive for H5N1. These isolated AI incidents in Hong Kong in the past few years provide further testimony that our stringent preventive and control measures have by and large been effective in containing the threat of AI.

RECENT H7N9 AI OUTBREAK IN THE MAINLAND

6. On 31 March 2013, the National Health and Family Planning Commission of the Mainland notified the World Health Organisation (WHO) of the first three cases of human infection with avian influenza A (H7N9). As of 15 November 2013, a total of 138 human infected cases were reported in the Mainland, involving 12 provinces/municipalities. One of the most recent cases concerns a three-year-old boy residing in Dongguan, which was reported by the health authority of Guangdong Province on 5 November 2013.

7. According to the latest risk assessment published by WHO in October 2013³, most human avian influenza A (H7N9) cases have reported contact with poultry or live animal markets. Knowledge about the main virus reservoirs and the extent and distribution of the virus in animals remains limited and, because it causes only subclinical infections in poultry, it is possible that the virus continues to circulate in China and perhaps in neighboring countries. As such, reports of additional human cases and infections in animals would not be unexpected, especially as the Northern Hemisphere autumn approaches and causes weaker immunity in human beings. Although four small family clusters have been reported among previous cases, evidence does not support sustained human-to-human transmission of this virus.

² While there is no locally acquired case of human infection, there were two imported human cases recorded in 2003, one in 2010 and another one in 2012.

³ WHO influenza at the human-animal interface – Summary and assessment as of 7 October 2013 (http://www.who.int/influenza/human_animal_interface/Influenza_Summary_IRA_HA_interface_7October13.pdf)

ENHANCED MEASURES AGAINST H7N9 AI

8. Since the outbreak of H7N9 AI in the Mainland, the Administration has been maintaining close liaison with the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and the relevant entry-exit inspection and quarantine authorities (CIQs) in the Mainland to assess the development of the outbreak and discuss the response measures required to ensure the safety of live poultry and poultry products supplied to Hong Kong and to safeguard public health. On top of the safeguards already in place and the various on-going monitoring measures as set out in paragraph 3 above, we have stepped up surveillance against H7N9 and other preventive measures as elaborated in the ensuing paragraphs:

Local Poultry Farms

- (a) AFCD has stepped up environmental surveillance at local poultry farms. The department selects nine farms per month at random and has increased the number of environmental samples collected by 10%;

Man Kam To Animal Inspection Station

- (b) The Centre of Food Safety (CFS) of FEHD strengthens inspection to live poultry consignments from the Mainland, and validates the health certificates of these consignments;
- (c) Starting from 11 April 2013, CFS collects tissue swabs from 30 poultry in each consignment for rapid test (i.e. PCR test) for influenza A virus, covering both H5 and H7 viruses. From 11 April 2013 to end of October 2013, the test results of all the 9 300 swabs sampled from over 38 400 birds were satisfactory, with no positive result for either virus;

Poultry Wholesale Market

- (d) AFCD has constructed new facilities to hold leftover local chickens, imported chickens and minor poultry separately to minimise cross-infection. The stocking area is cleaned every hour and the market floor is disinfected twice every week;
- (e) CFS has increased the frequency of collecting environmental

swabs to four times a month and the number of sampling spots to 288 per month at the poultry wholesale market;

- (f) AFCD has stepped up regular and surprise checks on adherence to the biosecurity requirements at the poultry wholesale market by wholesalers and their workers, such as cleaning and disinfection of poultry holding cages;

Live Poultry Retail Outlets

- (g) FEHD has stepped up inspections to public market stalls and fresh provision shops selling live poultry to once a week, and demands strict compliance with the requirement of no overnight stocking of live poultry at retail outlets;
- (h) Apart from the cleansing of public areas of public markets three times a day by the cleaning contractors, live poultry stall operators have been required to cleanse their stalls after the close of business every day, followed by further cleansing and disinfection by the market cleansing contractors;
- (i) FEHD has commissioned the University of Hong Kong to collect faecal and drinking water samples from selected live poultry retail outlets for testing of AI. The number of samples has increased to a total of 326 per month. Accumulating from January 2012 to September 2013, some 7 000 samples were collected and tested negative for H7 AI virus;

Others

- (j) In addition to routine street cleansing service, FEHD has stepped up inspection, cleaning and disinfection with diluted bleach at public places where wild birds gather. Stringent enforcement actions against feeding of wild birds causing dirtiness to public places have also been taken; and
- (k) We have also been calling on all poultry workers in Hong Kong to observe good personal hygiene and receive the free seasonal influenza vaccination.

9. With regard to the measures taken at the Mainland side for the prevention of possible spread of AI to Hong Kong via the importation of live poultry, we should emphasise that a registered farm system has been adopted

since 1998 whereby live poultry supplied to Hong Kong from the Mainland would only come from registered farms, mainly in Guangdong Province. In these farms, strict biosecurity measures, traceability arrangements and drug residue monitoring are imposed. A vaccination programme for poultry against H5 AI has also been introduced since 2003. These farms are subject to regular inspections by the relevant CIQs and CFS to ensure compliance with the prescribed AI control requirements. So far, the registered farms have a good track record of compliance. The supply of chilled and frozen chicken and fresh poultry eggs to Hong Kong followed a similar registered farm system since 2002 and 2007 respectively.

10. All live poultry exported from the Mainland to Hong Kong are subject to stringent import protocol. The poultry destined for export are put under quarantine for five days and are required to pass blood tests to show a sufficient level of antibodies against H5 prior to leaving the farms. All live poultry bound for Hong Kong must be accompanied by an official animal health certificate to confirm that the poultry have been tested negative for AI virus (covering both H5 and H7 subtypes) and are free from clinical signs of diseases and have been inspected by official veterinarians prior to export.

11. The above registered farm system practised in the Mainland for supply of live poultry to Hong Kong is in line with the concept of compartmentalisation suggested in the OIE guidelines. According to the relevant guidelines, compartmentalisation may allow the functional separation of a subpopulation of a distinct health status from other domestic animals or wild animals through biosecurity measures, thereby facilitating the risk management by both exporting and importing parties for the purpose of disease control and the continuation of trade.

12. In fact, in view of the H7N9 AI outbreak in the Mainland, with the support of AQSIQ, the relevant CIQs have enhanced H7 AI surveillance on live poultry and poultry products bound for Hong Kong by increasing the sample size and the frequency of farm inspections. We have also since April 2013 conducted PCR test against H7 AI in imported live poultry upon their entry at the boundary control point. All testing results are negative so far. As a special arrangement, we have also agreed with the Mainland authorities that import of live poultry and/or poultry products would be suspended from registered farms/processing plants within a radius of 13km from an infected farm/live bird market in case of any confirmed H7N9 poultry case. In the meantime, we are continuing our discussion with the Mainland authorities on some technical issues about H7 serological test.

WAY FORWARD

13. Based on our latest risk assessment, we believe that the prevention and control measures set out in the above paragraphs are serving the purpose of containing the risk of AI (both H5 and H7 subtypes) at large. The need for continued vigilance is fully recognised. We will closely monitor the development of the H7N9 situation in the Mainland and will take additional preventive and surveillance measures in Hong Kong as and when necessary.

ADVICE SOUGHT

14. Members are invited to note the content of the paper.

**Food and Health Bureau
Agriculture, Fisheries and Conservation Department
Food and Environmental Hygiene Department
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