USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Voluntary _ Public

Date: 6/28/2012
GAIN Report Number: HK1217

Hong Kong

Post: Hong Kong

HKG Approves New AI Vaccine for Poultry

Report Categories:
Agriculture in the News
Poultry and Products

Approved By:
Erich Kuss
Prepared By:
Caroline Yuen

Report Highlights:

The Hong Kong government (HKG) has decided to recommend Re-5 H5N1 AI vaccine as an alternative to the existing Intervet Nobilis H5N2 AI vaccine for the mandatory vaccination program in local poultry farms after a 12-month successful field trial in two farms. The HKG introduced mandatory vaccination for poultry since 2003 as one of the precautionary measures against avian influenza outbreaks. However, an ensuing AI case in a local farm in 2008 prompted the HKG to evaluate the efficacy of the existing vaccine and to identify other possible options. Based on research results and a year's field trial, the HKG concluded that Re-5 vaccine is effective in lowering AI risk and recommended its use in chicken farms. The Hong Kong government regards AI risk level in Hong Kong, especially human infection, to be relatively low and stable, although it also understanding that it is unrealistic to expect the complete elimination of AI risk in the territory.

Background

The first avian influenza outbreak in Hong Kong occurred in 1997 and the H5N1 virus killed six people. Over the years, the HKG introduced a series of measures to combat AI risks. Since then there was no local human infection other than two human imported cases in 2003, one in 2010, and one so far in 2012. There was no AI outbreak in local chicken farms since 2008. However, there was one chicken carcass found infected with H5N1 in a wholesale market in 2011. The Hong Kong government concluded that the AI risk in Hong Kong remains low and stable but it is not scientifically justifiable to expect complete elimination of AI risk.

The Hong Kong government developed and adopted a series of precautionary measures in the past decade which have been proved effective in lowering AI risks in Hong Kong. These measures include:

1) Surveillance of birds at all levels such as poultry imports and local supplies;
2) Mandatory vaccination for both local and imported live chickens;
3) Enforcing biosecurity measures in local farms;
4) Restricting chicken imports from China to registered farms;
5) Prohibiting overnight stocking of live chickens in retail outlets;
6) Prohibiting backyard poultry;
7) Reducing the number of chicken farms through a "license surrender" program. The current farm number stood at 30 with a total of 1.3 million chicken populations; and
8) Reducing the daily supply of live chickens to 15,000 head compared to 100,000 in 2003.

Mandatory Vaccination

Between 1997 and early 2002, three major AI outbreaks occurred in Hong Kong. The first bird flu crisis occurring in 1997 resulting in six confirmed human deaths. The other two outbreaks happened in May 2001 and February 2002. The three major outbreaks led to the slaughter of over 3 million chickens at a compensation cost of HK$200 million (US$26 million) paid to the local industry by the government.

Subsequent to the outbreak in February 2002, the HKG introduced a vaccination program on a trial basis in April 2002 in a farming district. The vaccine used was the Dutch Intervet Nobilis H5N2, which was manufactured in Mexico. Vaccination was then extended to more farms when Hong Kong suffered from another bird outbreak in December 2002. After one year of trial with satisfactory results, the HKG decided to launch a mandatory vaccination program for all local chicken farms starting in April 2003. In the following year, all chicken supplies from China have to be vaccinated before being exported to Hong Kong. Thereafter, there was no

outbreak of AI in local chicken farms until December 2008.

The December 2008 AI outbreak was a concern because the death of 200 H5-infected chickens included vaccinated as well as unvaccinated birds. The outbreak led to doubts about the effectiveness of the vaccine in use. Local scientists warned that given the inherent property of virus mutation, the diminishing effectiveness of the vaccines was inevitable, as these vaccines have been on the market for more than 10 years ever since compulsory vaccination in 2003.

Following the outbreak of the AI in 2008, the HKG set up an investigation group to research on the efficacy of Intervet vaccine and identify vaccine alternatives. The government then commissioned three research institutions to conduct the study. The three vaccines studied were the Intervet vaccine which has been in use since 2003, the Harbin Re-5 H5N1 vaccine in use on chickens in China for exports to Hong Kong since 2008 and a H5N3 vaccine used in the European Union since 2006.

The result of the studies showed that the Intervet vaccine was still effective against H5N1 virus, whereas Re-5 vaccine provided similar or even better protection as compared with the Intervet vaccine. The HKG then launched a 12-month field trial for Re-5 in two local farms to fully evaluate the efficacy of the vaccine. The field trial result indicated that the vaccinated chickens had not responded adversely to the Re-5 vaccine. The Intervet vaccine and the Re-5 vaccine had comparable efficacy. Tests for the H5 viruses in both environmental samples and swabs collected from chickens had been conducted and had yielded negative results.

Upon satisfactory field trial of Re-5 vaccine, the Hong Kong government decided to introduce Re-5, in parallel to Intervet, as an alternative vaccine option for mandatory vaccination program in Hong Kong.

Re-5 is yet to be registered for importation to Hong Kong. Reportedly, the HKG will allow the use of Intervet and Re-5 in the same farm but each chicken batch has to stick to either one vaccine in order to facilitate surveillance.

Farmers have mixed feelings over the new vaccine. They generally lack some confidence in the efficacy of Re-5 vaccine as it has never been used in Hong Kong. However, the cost is expected to be lower than Intervet. The price will be available after the vaccine has been registered and made available in the market. Currently, the Dutch vaccine cost about HK$0.40 per injection. Some farmers will probably switch to Re-5 on cost considerations.

The HKG indicated that a new vaccine, Re-6, would be introduced in due course in China to match the prevailing clade 2.3.2.1 of AI virus commonly found in the region. They will closely monitor the situation so as to evaluate its timely introduction to Hong Kong considering the circulating strain of AI virus in Hong Kong.