疫學研究組

林育如副研究員

摘要

屬 2.3.4.4 分群的新型 H5 高病原性家禽流行性感冒自 2014 年1 月於韓國爆發 HPAI 疫情後,開始散布於日本、歐洲及北美。臺灣於 2015 年1月起爆發多種重組亞型 H5N2、H5N3 及 H5N8 威染,截至 9/8 為止,共計 972 場確診為 H5 AIV 感染。針對案例場半徑一公里 內禽場進行三輪周邊監測,目前共檢驗2,146場次,本所完成檢驗 1,407 場次。確診之鴨場為 36 場次,其中 32 場為新型 H5;確診之雞 場為22場次,其中6場為新型H5,16場為舊型H5。抗體檢測部分, 共計完成 984 場次,對於舊型 H5,H6 及 H7 抗體陽性率,分別為 64.2%, 61.1%及 5.6%, 且主要是存在於蛋雞群。周邊監測為新型 H5 HPAI 陽性場的鴨場並無明顯臨床症狀, 鴨隻為新型 H5 之帶原者, 建議應全面監控。而 H5 及 H6 高抗體陽性率顯示動物受到病毒的感 染,將導致病毒檢出難度增加,並容易促使病毒演化,建議未來應針 對蛋雞場及鴨場重新擬定監測及控制方法。

Analysis of Active Surveillance of HPAI Positive Farms from January to August 2015

Yu-Ju Lin

Abstract

Since January 2014, a novel H5 highly pathogenic avian influenza virus (HPAIV) classified in subclade 2.3.4.4 has caused outbreaks in South Korea, so as in Japan, Eurasia and North America. In Taiwan, HPAIVs H5N2, H5N3 and H5N8 have been reported since January 2015, and 972 cases due to the infection of the novel H5 HPAIVwere confirmed by September 8, 2015. To identify potential infected premised as possible, active surveillance was carried out on poultry farms within 1km radius of the HPAI positive farms. Each farm under the surveillance was sampled at a one-month interval for three times. To date, 2,146 farms have been sampled by local government, and samples from 1,407 farms of the 2,146 farms have been tested by our institute. Of the tested farms, the novel H5 HPAIV was identified in 32of 36 H5-positive duck farms and 6 of the 22 H5-positive chicken farms. In addition, a serological surveillance was conducted to investigate the prevalence of antibodies against avian influenza virus H5, H6 and H7 subtypes of North American lineage. The serological surveillance demonstrated seropositive rates of H5, H6, and H7 subtypes were 64.2%, 61.1% and 5.6%, respectively, and most of the positive farms were layer farms. Through the active surveillance, due to that the HPAI-positive duck farms did not show any clinical symptom, it is believed that domestic ducks may act as a carrier for novel H5 HPAI and should be competent oversight. High H5 and H6 seropositive rates reflect a number of poultry facilities have exposed to field viruses, and the high seropositive rates will facilitate mutation of field viruses and made detection of the

field virus more difficult. Collectively, these findings emphasize the necessity of reevaluating the avian influenza surveillance programs for layer and duck farms.