



FINAL REPORT

HPAI SURVEILLANCE AT POULTRY COLLECTING YARDS IN JABODETABEK

2010



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prepared by	Albertus Teguh Muljono Project coordinator, CIVAS
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co-authors/ contributor/ collaborators	Erianto Nugroho East Jakarta Field coordinator, CIVAS Sunandar Tangerang Field coordinator, CIVAS Deni Rajagukguk FAO Indonesia
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approved by	James McGrane Team Leader of the FAO HPAI Control Programme Indonesia Eric Brumm Chief Technical Advisor FAO HPAI Control Programme Indonesia
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Thank you for all the cooperation, support, and acceptance we have received during this project. Hopefully the results will be beneficial for us all.

HPAI SURVEILLANCE IN POULTRY COLLECTING YARDS IN JABODETABEK

1.1. Background

Avian Influenza (AI) is a serious threat to poultry and human. Currently Indonesia is categorized as the country with the highest AI death cases in human. According to WHO data, until March 2010 there were 163 AI human cases with 135 fatalities (case fatality rate 82.82%) in Indonesia (WHO, 2010).

The role of poultry as the main source of AI transmission still generates many questions, among those are about the mechanism of AI transmission to human, does poultry production and marketing chain play a significant role in the spread and transmission of AI, and many others. In relations with that, surveillance is needed to scientifically detect AI in various levels, such as the poultry production and marketing chain, including poultry collecting yards (PCYs).

A poultry collecting yard (PCY) is a place where poultry from various areas are gathered before slaughtered or sold to the market. In this facility, contact not only occurs between gathered poultry, but also between poultry and humans (for example poultry vendors and buyers). Poultry entering the facility could carry AI virus with them since AI is endemic in various areas in Indonesia. This increases the risk of AI virus transmission from poultry to people who have intensive interaction with poultry in collecting facilities (CIVAS, 2008).

Every day hundreds of thousands of poultry from various areas are distributed into Jabodetabek area. This leads to the development of PCYs. So far, there are hundreds of PCYs in Jabodetabek. The collecting and husbandry system applied to poultry in PCYs also varies from one facility to another. With these conditions, Jabodetabek is an interesting place to conduct surveillance on AI virus circulation in PCYs.

1.2. Objective

To study the presence of AI viruses in poultry in vehicles and those arriving at PCYs in Jabodetabek.

METHOD

2.1. Location and Time

The surveillance program was conducted at poultry collecting yards (PCYs). Twenty PCYs outspread in two municipalities/district in Jabodetabek were involved in this program.

Surveillance was conducted for 2 months, starting from 20 January - 20 February 2010. Monitoring staff were trained by FAO before the surveillance. Training was conducted in Bekasi on 21-23 Desember 2009.

2.2 Method

Activities conducted in the surveillance were: preliminary activity and selection of PCYs as surveillance locations, socialization, placement of sentinels, monitoring and sampling of sentinels, collecting information from arriving trucks, sample testing, monitoring activities, sample collection, and sample analysis.

2.2.1 Pre-Surveillance Activity and Selection of PCYs

Training was conducted for monitoring staffs by trainers from FAO. The training included standard operating procedures for collecting samples, handling samples, biosecurity, monitoring activities and recording.

Prior to surveillance, coordination was conducted with the Livestock Service Office of Tangerang City and Livestock Service SubOffice of East Jakarta, which has the authority on all PCYs in those areas, by FAO. Through this coordination, the marketing system of live poultry and number of PCYs in Tangerang and East Jakarta was listed.

Based on that list, the number of PCYs involved in the surveillance was determined. Through consideration of distribution, 20 PCYs were involved in this program. Ten PCYs were selected evenly from Tangerang and East Jakarta. PCYs were selected through simple random sampling.

2.2.2 Socialization

After selection of PCYs, the surveillance program was socialized to facility owners. This was done by officers from the Livestock Service Office in 1 week time before the program began.

2.2.3 Placement of Sentinel

Sentinels used in this study were non-AI vaccinated commercial layer chickens originating from a farm known to have no AI outbreak history, provided by FAO. Before distribution, all sentinels had been tested serologically against (H5) AI virus to ensure its freedom from (H5) AI. Only sero-negative sentinels were distributed to the selected PCYs. Sentinels were distributed to 20 PCYs, hence each PCY received 2 sentinels. Sentinels were housed together with other poultry in the facility (non-sentinel poultry), attuned with the condition of each facility. Any dead sentinel was replaced with a new one.

2.2.4 Monitoring Activities

In each PCY, monitoring were done every day by collector yard's team and by Market Surveillance Officers from the local Dinas to supervise the rearing and health of sentinels placed in each facility, and collect environmental samples from arriving trucks and poultry.

The sentinel monitoring program consists of observation of sentinel rearing - ensuring sentinels receive adequate feed and water and observation of sentinel health condition. Monitoring was conducted twice a day. Dead sentinels were reported to Market Surveillance Officers by the monitoring staff. Afterwards, the Market Surveillance Officer would come to collect oropharyngeal swab samples from the dead sentinel.

In each PCY the monitoring staff collected oropharyngeal swabs from arriving poultry and environmental samples from arriving truck/vehicles. The monitoring staff also kept a logbook to record information from every truck/vehicle that arrived at PCYs.

2.2.5 Sample Collection

Sentinel oropharyngeal swabs were collected from dead sentinels by Market Surveillance Officers from the local office. Samples were placed in one VTM vial for each sentinel.

Oropharyngeal swabs were also collected from poultry in arriving trucks. A total of 35 samples were collected from each truck and 20 trucks/vehicles were sampled from each collector yard. In cases where there were sick or dead birds

found on the truck, oropharyngeal swabs were taken from no more than 5 sick/dead birds and pooled into 1 VTM vial.

Environmental samples were collected from 5 surfaces in arriving vehicles, which were:

- Swab 1: The steering wheel, shift knob, the three pedals, and the driver's side floor
- Swab 2: The truck bed
- Swab 3: The crates along the left side of the truck
- Swab 4: The crates along the right side of the truck
- Swab 5: The crates along the rear end of the truck

All samples collected were stored in cool-boxes with ice packs. The cool-box was then sent to the laboratory by FAO.

2.2.6 Sample Analysis

All samples collected in this surveillance were analyzed at the Animal and Fish Diagnostic Laboratory of DKI Jakarta Province.

RESULT

At the start of the surveillance, monitoring staff first collected information on the location and operational hours of each PCY in Tangerang and East Jakarta as is shown in Table 1 and Table 2 below.

Table 1. East Jakarta Collecting Yard Team

No.	NAME	Location	Owner	Operational Hour	Sampling Time
1	Basrizal	Cakung	Lasto	09.00-15.00	08.00-14.00
	Mira Lestari				
2	Aldila salimah	Cakung	Sugimin	09.00-15.00	08.00-14.00
	Hadan Misbach Mubaroq				
3	Pujianto	Pintu Air	Banta	22.00-18.00	22.00-05.00
	Ade Satria Sopyan				
4	Akramuzzein	Pulogadung	Sudarwanto	20.00-16.00	20.00-05.00
	Edi Sudrajat				
5	Jamaludin Soleh	Matraman	Brahmanto	23.00-17.00	22.00-00.00
	Anjar Pujarama				
6	Lili Gozali	Matraman	Jaya Chicken	23.00 - 05.00	23.30-03.00
	Eko Suwarno				
7	Mohamad Roni	Matraman	Tini	23.00-17.00	23.30-07.30
	Eko Yuono				
8	Ari Wibowo Nugroho	Cipayung	Sholeh	17.00 – 05.00	19.00-23.00
	Anton Suwaifi				
9	Wardi	Matraman	Jaya Mandiri	00.00 - 12.00	03.00-06.00
	Jaka Permana Sidik				
10	M. Tito Grandisa	Pulogadung	Kadow	07.00-17.00	12.00-15.00
	Nurohman				

Table 2. Tangerang Collecting Yard Team

No.	NAME	Location	Owner	Operational Hour	Sampling Time
1	Ruben Rahmat	Karawaci	Zaenal	05.00 - 18.00	09.00-10.00
	Tomi Syaputra				
2	<i>Ramlah</i>	Karawaci	Aan Igbal	24 hours	17.00-20.00
	M. Evan Setya Maulana				
3	Dani Wangsit Narendra	Neglasari	Hasyim	08.00 - 15.00	08.00-15.00
	Abdullah Pauzi Asagap				
4	Hafidz Rasyid	Cipondoh	Usman	15.00 - 08.00	16.00-08.00, 24.00
	Deni Sukri Wijaya				
5	Mahzhuzh Al Mutawally	Ciledug	Totok	16.30 - 09.00	16.30- 20.00
	Amalliya Radi Rohmaani				
6	Dani Hamdani	Neglasari	Boyke	24 hours	02.00-10.00
	Andhy Priyo Sayogo				
7	Zulhendra	Batu Ceper	Mudini	24 hours	10.00-12.00
	<i>Ratih Sri Widayaswati</i>				
8	Arief Abadi	Batu Ceper	H. Nur	08.00 - 18.00	15.00-18.00
	Amin Kristianto Saputra				
9	<i>Nina Herlina</i>	Neglasari	Susanto	06.30 - 17.00	05.30-08.00
	Eka Wilatika Pebriansjah				
10	<i>Trias Syaifulina</i>	Cibodas	Zainal Arifin	24 hours	15.30-01.00
	Marlan				

Each PCY was monitored by 1 collecting yard team. Each team consisted of 2 people which were available for 24 hours/day. All teams, as shown in Table 1 and Table 2, have conducted activities according to methods and operating procedures from FAO, starting from monitoring sentinel chickens, collecting oropharyngeal samples from arriving poultry, collecting environmental samples from arriving trucks, and filling logbooks.

During surveillance, teams were provided with accommodations that were located near their PCY, therefore making them accessible 24 hours/day. Each team was also facilitated with a motorcycle for transportation.

Later in the surveillance, besides monitoring sentinels and collecting bird and environmental samples from poultry trucks arriving at PCYs, FAO decided to also collect data from all poultry trucks coming to Pulogadung Collecting Area in East Jakarta, hence additional teams were assigned as shown in Table 3.

Table 3. Pulogadung Log Book Team, East Jakarta

No.	NAME	Location	Owner	Operational Hour	Working Hour
1	Beni Kurnia Umbara	Pulogadung	Pulogadung	24 jam	24 jam
2	Renaldo Arnel Putra YR	Pulogadung	Pulogadung	24 jam	24 jam
3	Syaiful Arbian	Pulogadung	Pulogadung	24 jam	24 jam
4	Akhmad Fauzzy	Pulogadung	Pulogadung	24 jam	24 jam
5	Rimba Rizki Ananda	Pulogadung	Pulogadung	24 jam	24 jam
6	Abdul Aris	Pulogadung	Pulogadung	24 jam	24 jam
7	Dede Rosadi	Pulogadung	Pulogadung	24 jam	24 jam

All field data collected during the surveillance were reported directly to FAO, therefore unavailable in this report.

CIVAS TEAM

Project Coordinator : Dr Albertus Teguh Muljono
East Jakarta Supervisor : Dr Erianto Nugroho
Tangerang Supervisor : Dr Sunandar

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Center for Indonesian Veterinary Analytical Studies

Jl. RSAU No. 4 Atang Sanjaya

Semplak, Bogor

Telp : 0251-7535977

email : civasland@yahoo.com, civas@civas.net

website : www.civas.net