

(Abroad) Domestic Official trip report form (Student)

2014/4/23 (Year/Month/Day)

Name	Huy Chu Duc
Laboratory	Microbiology
Year (Grade)	2013
Destination	Vietnam
Period of trip	2 weeks (from 16 th March to 28 th March 2014)
Purpose of trip	Selection of candidate live bird markets for the research on improvement of management of live poultry markets for the control of highly pathogenic avian influenza

Summary of activities (about 800 words, provide photos, tables and figures that clearly show the activities during the period)

The previous study on avian influenza (AI) surveillance program in Vietnam conducted by Regional Representation for Asian and the Pacific of World Organization for Animal Health (OIE-Tokyo), Laboratory of Microbiology, Graduate School of Veterinary Medicine, Hokkaido University and Department of Animal Health of Vietnam (DAH) showed that live bird markets (LBMs) have a potential to act more than backyard farms as the primary source of AI viruses as well as H5N1 highly pathogenic avian influenza (HPAI) virus to amplify, maintain, circulate and transmit the virus in the environment in Vietnam. It is important to improve biosecurity of LBMs to minimize the virus transmission to other animals and humans for the control of AI. Therefore, we propose a new research for management of AI risks in LBMs with intervention and visit Vietnam. In this trip, we aimed that we want to select two types of retail markets with and without biosecurity application to conduct our research in June 2014 in Vietnam.

1. In the Department of Animal Health of Vietnam, Hanoi:

In the first day of our trip, we had a meeting with Dr Nguyen Thu Thuy, vice director of DAH in Hanoi, Vietnam to discuss about: (1) Situation of AI surveillance and current control measures in LBMs, (2) DAH's plan for the control of AI in LBMs. (3) Update situation of LBM project. After discussion, we decided to visit one typical wholesale market for poultry in Hanoi, namely Ha Vi market in the next day.

2. In the Ha Vi wholesale market for poultry, Hanoi:

Ha Vi market is the biggest wholesale market in the North of Vietnam that supported by Vietnam Avian and Human Influenza Control and Preparedness (VAHIP) project under World Bank fund. We had a meeting with local authority, animal health workers and market managers about AI surveillance program and the cooperation between human sector and veterinary sector

for the control of AI outbreaks in this market. Under the support of VAHIP project, Ha Vi wholesale market has been upgraded according to standards and hygiene and operated from 10/2011 with the aim to provide the clean poultry to retail markets in Hanoi capital area.



Figure 1. Some photos in Ha Vi wholesale market

3. In Hue city, Thua Thien Hue province

Hue city of Thua Thien – Hue province is a priority location that proposed to select for this trip. Reasons justify this selection are that infrastructure LBMs in Hue city is suitable for this study. Veterinary services in this province have been well established and operated efficiently. Hue city is a hub for poultry movement and consumption because it has a large number of population and tourists. In addition, Hue is a main location for animal movement route from the North to South of Vietnam (Figure 2). Currently, Hue also has been selected to carry out a project on surveillance of AI in humans and in animal at pig slaughterhouses and animal raising households, as well as other One Health activities at the household level. Leaders of Thua Thien – Hue province strongly commit to carry out



Figure 2. Map of Vietnam

intensively One Health activities. Certainly, they can further collaborate to carry out this LBM study.

In the first day in Hue city, we visited the office of Sub-Department of Animal Health of Thua Thien Hue province (Hue SDAH) to have a meeting with Dr. Nguyen Van Hung, director of Hue SDAH and his staffs. In this meeting, we exchanged the information of avian influenza in Hue, infrastructure of LBMs and their biosecurity situation and the results of AI surveillance program. We introduced our research proposal for LBMs market to leader committee of Hue SDAH. We got some important information from this meeting for our future study on LBMs:

- The first AI outbreaks were found in 2004.
- Thua Thien Hue province has more than 250 poultry traders, 7 poultry slaughterhouses; more than 2,000 poultry are slaughtered daily; **8 live poultry markets**; slaughtering business is freedom and lack of management levels.
- Currently, Thua Thien Hue province has upgraded biosecurity model for 4 markets as **Thuy Phuong, No, Loc An and An Lo**.

Dr. Hung totally agreed with us about our research proposal and he want to collaborate with us to conduct this research in Hue. He listed 1 slaughterhouse and 3 LBMs in Hue city for visiting; 2 LBMs applied biosecurity model namely, Thuy Phuong market (1) and No market (2) and other one (Mai market) without biosecurity application. Thuy Phuong and No market also are upgraded infrastructure for the biosecurity application by VAHIP project. In the day after, we visited these listed locations and conducted knowledge, attitude and practice (KAP) survey for sellers in 3 LBMs.



Figure 3. Two retail markets with biosecurity application by VAHIP project



Figure 4. Mai market without biosecurity application



Figure 5. Phu Vang slaughterhouse in Phu Vang district, Hue city

4. Conclusion

After we finished our survey in LBMs in Hue, we made a discussion among members about the summary of results in the hotel in Hue. We decided select Hue as a study location for the selection of 6 retail markets (three of them with biosecurity application and three other without biosecurity application for case-control study). We listed some points need to revise in our research proposal after go back to Hokkaido university:

- How to implement our research in Hue and harmonize activities results between VAHIP project and our project?

- How large of sample size we need to conduct Virological survey?
- How to transfer safely the collected samples from Hue SDAH to National Center for Veterinary Diagnostic in Hanoi for screening test?
- What kind of questionnaire form and objects for KAP survey?

We finished successfully our trip to Vietnam in one week with selected study area meet the requirement of research proposal for the One Health concept. I spent one more week in Vietnam to prepare necessary procedures for the negotiation of next steps with DAH again for launching our research in Hue.



Figure 6. Discussion for summary of activities in our trip

Approval of supervisor	Institution • Official title • Name : Laboratory of Microbiology, Graduate School of Veterinary Medicine, Prof. Yoshihiro Sakoda <div style="text-align: right;">印</div>
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