Pig Production System and Value-Chain in South-East Asia

1st SGE-Asia Meeting
10 April 2019, Beijing, China
Pigs in South-East Asia
Pig Density in South-East Asia

FAOStat, 2006

Pig is a major meat source for GMS countries and the Philippines
Integrated pig–fish–duck–vegetable system in Countries around South China Sea

Manure

Bio-digester

Fuel

Gardening

Digested Manure

Typical Pig Value-Chain in SE Asia

Provincial production-consumption

Consumers
- Village
- District
- Provincial markets

Wholesalers and Retailers

Import - live pigs from other provinces and/or countries (e.g. VN/THA), especially to provincial abattoirs

Abattoirs
Provinces, Districts and Villages

Producers
- Smallholders
- Local, crossbred, pure pigs

Export (THA, VN)

Input Suppliers
- farmers, CAHWs, local traders, Luck Hok, Company
- local manufacturers, international supply from VN and THA
- local commercials, import from VN, THA and others
- CAHWs, District Vet, Gov’t, drug shop owners
- Bank, money lenders, relatives, etc

Consumers

Export (THA, VN)

Sak Choeun et al, 2008, Value Chain for Pig Meat Marketing in Cambodia
Typical Pig Value-Chain in SE Asia

Metropolitan production-consumption

Consumers

Wet Markets

Supper Markets

Wholesalers and Retailers

Abattoirs

Meat Processors

Traders

Collectors Middlemen

Producers
- Smallholders
- Local, crossbred, pure pigs

Input Suppliers

Imported live pigs

Imported meat

Imported live pigs

Sak Choeun et al, 2008, Value Chain for Pig Meat Marketing in Cambodia
Vietnam: Pig Farming System

Raw pig density (head/km²)

2005

PIG FARMING SYSTEM

Medium commercial

Large/Integrated

Small commercial

Smallholder

Phil Psilos, smallholder Swine-Pig Meat Production in Asia
Dinh Xuan Tung, et al, Current Status and Prospects for the Pig Sector in Viet Nam: A Desk Study
Vietnam: Pig Movements

Domestic movements to supply demands in big cities and a net exporter
Vietnam exports mainly frozen suckling pigs, and in the past it exported to Western countries but at present, most exports are live pigs to China.
Vietnam: Pork Consumption

• Pork represents more than 70% of meat consumption in Vietnam, and pig production provides livelihood for more than 4 million small farmers in the country

• 93% pork consumed fresh, and 7% go to food processing companies (10% in big cities)

• Most pork consumed within 10km of slaughter site

• Pork production is constrained by a lack of improved feed, poor quality and low hygiene slaughter and processing facilities
Laos: Pig Farming Systems

- 64% of households are involved in pig production, which totally contributes to 96% of total pig production
- The average number of pig per household is 1-4 animals
- A mixture of extensive (free-roaming) and intensive (fattened in pens for local markets)
Laos: Pig Movements

Net importer of pigs and pig products; transiting movements of live pigs into China
Cambodia: Pig Farming System

Pig Population in 2008

Animal census 08

Pig

6441 - 38714
62501 - 83911
105499 - 142062
176795 - 216807
341145
Cambodia: Pig Movements

Domestic movements to supply demands in big cities and a net importer
Myanmar: Pig Farming System

Nearly 95% of pigs are raised in small-scale farm, which is a main source for meat supply for local consumption.
Myanmar: Pig Movements

Domestic movements to supply demands in big cities; import/export/transiting movements
Thailand: Pig Farming System

PIG FARMING SYSTEM

- Smallholder
- Small commercial
- Medium commercial
- Large/Integrated

Pig density, 2018

DLD

Medium commercial
Thailand: Pig Movements

High level industrialized production; net exporter of pigs
Thailand: Pork Exportation

Constant high level of pork exportation

Tonnes

- Total pigmeat exports
- Cooked pigmeat exports

Constant high level of pork exportation
Philippines: Pig Production System

ASF Outbreaks in SE Asia, updated on April 4, 2019
Pig price differentials in the subregion

March 2019

Lowest pig price in Vietnam, especially in ASF affected areas
Pork demands in China may drive increased unofficial movements from SE Asia
More research is needed!!!
Conclusions

• The vast smallholder, low-biosecurity pig production system makes SE Asia at very high risk of ASF
• Short/medium/long-distance spread of ASF are likely attributed to different risk factors
• ASF outbreaks will likely lead to long-distance pig movements, driven by the price differentials and sociological factors
• Cross-border spread of ASF is difficult to control due to the long and porous borders between countries
• Once ASF outbreaks occur, the environment is likely to be heavily contaminated due to the heavy environment-relying and multi-integrated production system
• ASF crisis may cause significant changes to the current pig production and value chain system
• More in-depth research in the value chain is needed to support the compartmentalization approach

Surveillance and control of ASF should consider the local production system and socio-economic culture
References for the movement data

• A. Costales, 2007. Pig systems, livelihoods and poverty in South-East Asia: current status, emerging issues, and ways forward.


• FAO, 2012. Pig value chain study on disease transmission in Cambodia.


• OIE, 2019. Risk assessment study to support safe cross-border trade of FMD-susceptible livestock from Lao PDR and Myanmar to China.


Thanks for your attention!

谢谢！