

AFRICAN SWINE FEVER IN VIETNAM

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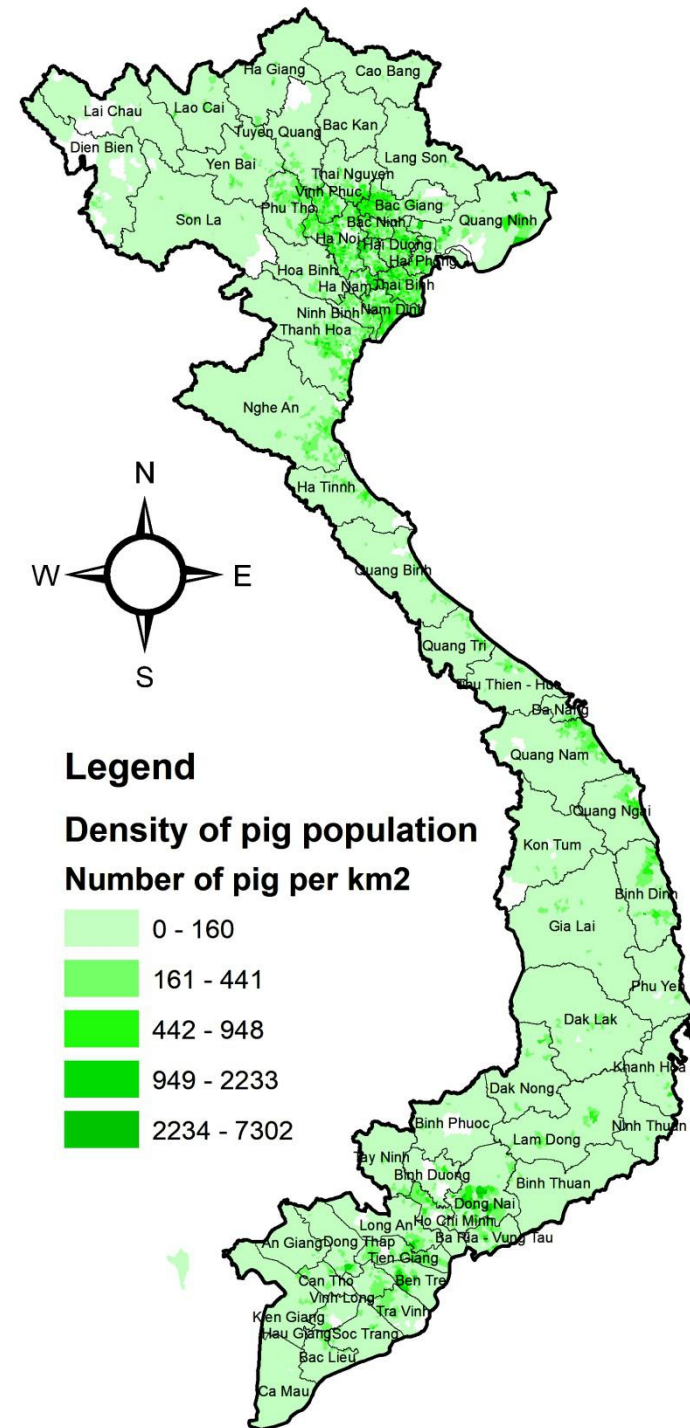
Beijing, 08 April 2019

Outline

- I. Brief of pig production
- II. Laboratory system
- III. Detection of African swine fever
- IV. Prevention and control activities

I. PIG PRODUCTION

- Total pig population in 2018: **28.2 million**
Pork volume: 3.82 million tons
- Total pig raising households: 2.5 million, contribute to 49% of total pig population, contribute to 40% of total pork volume
- Total large big farms: 10.000, contribute to 51% of total pig population, contribute to 60% of total pork volume
- Breeding pigs:
Sows: 3.81 million,
Boars: 76.000



II. LABORATORY SYSTEM

Animal Health Laboratory of DAH

1. National Centre of Veterinary Diagnosis (NCVD) in Ha Noi
2. Regional Animal Health Office No.1 in Ha Noi and Son La province
3. Regional Animal Health Office No.2 in Hai Phong city
4. Regional Animal Health Office No.3 in Nghe An province
5. Regional Animal Health Office No.4 in Da Nang city
6. Regional Animal Health Office No.5 in Dak Lak province
- 7. Regional Animal Health Office No.6 in Ho Chi Minh city**
- 8. Regional Animal Health Office No.7 in Can Tho city**

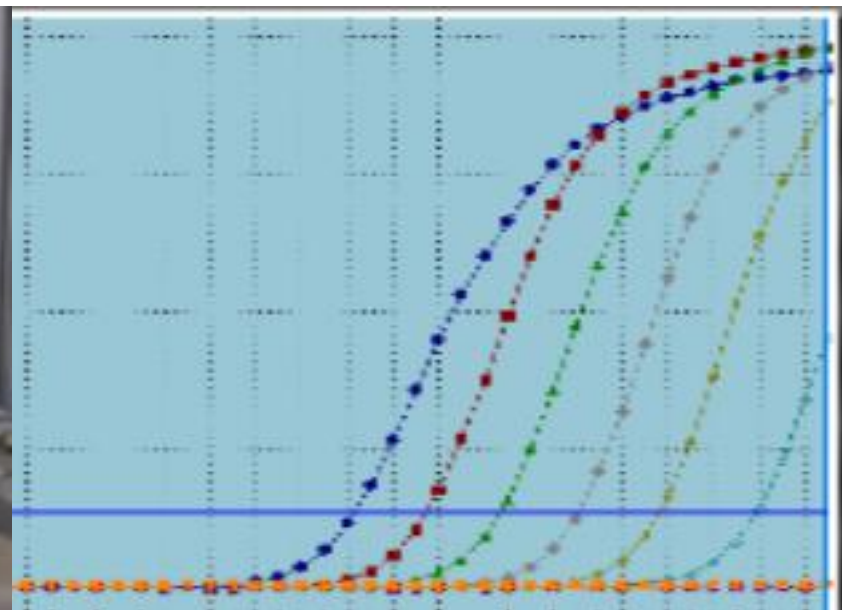
- All DAH's laboratories were accredited with BSL2 Plus



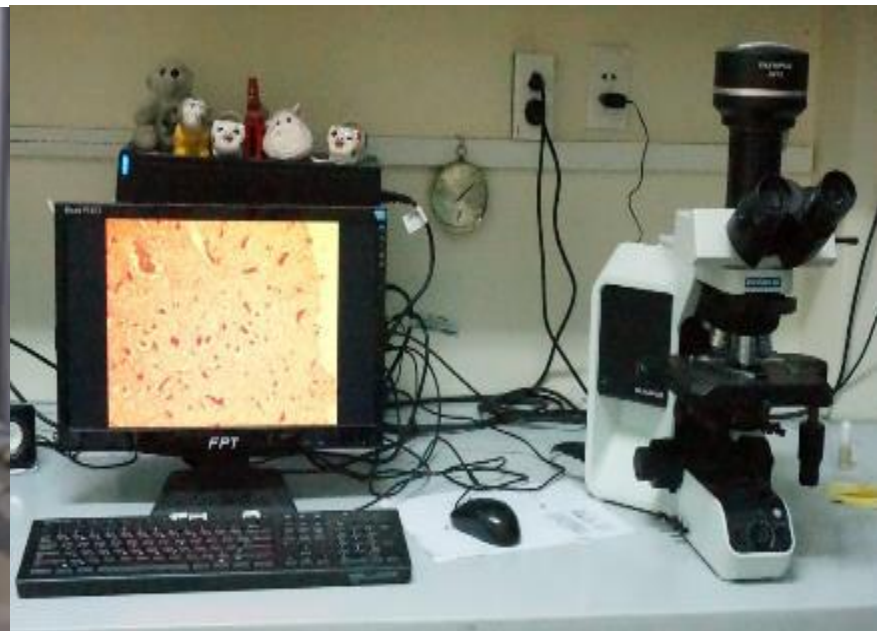


Laboratory of the Regional Animal Health Office No.6

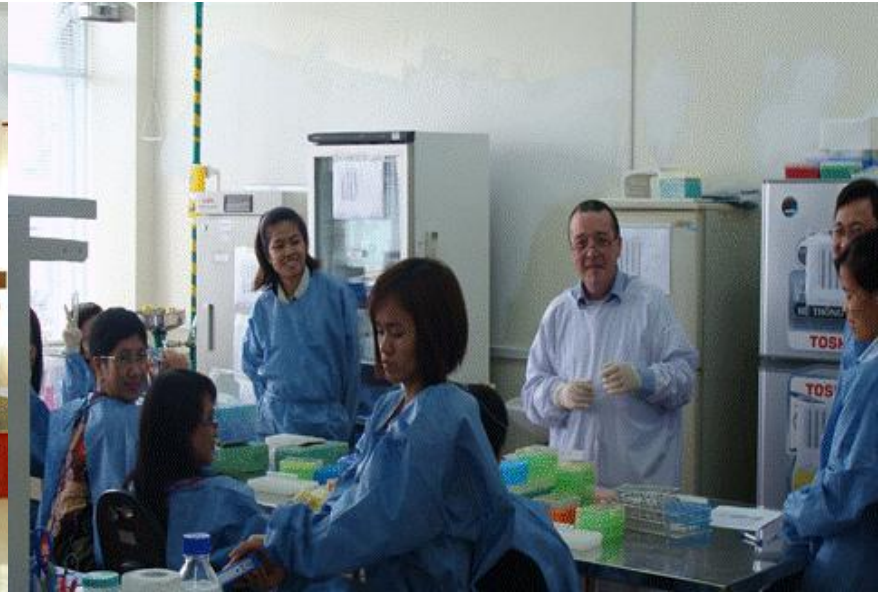
LAS-NN 11 and ISO/IEC 17025



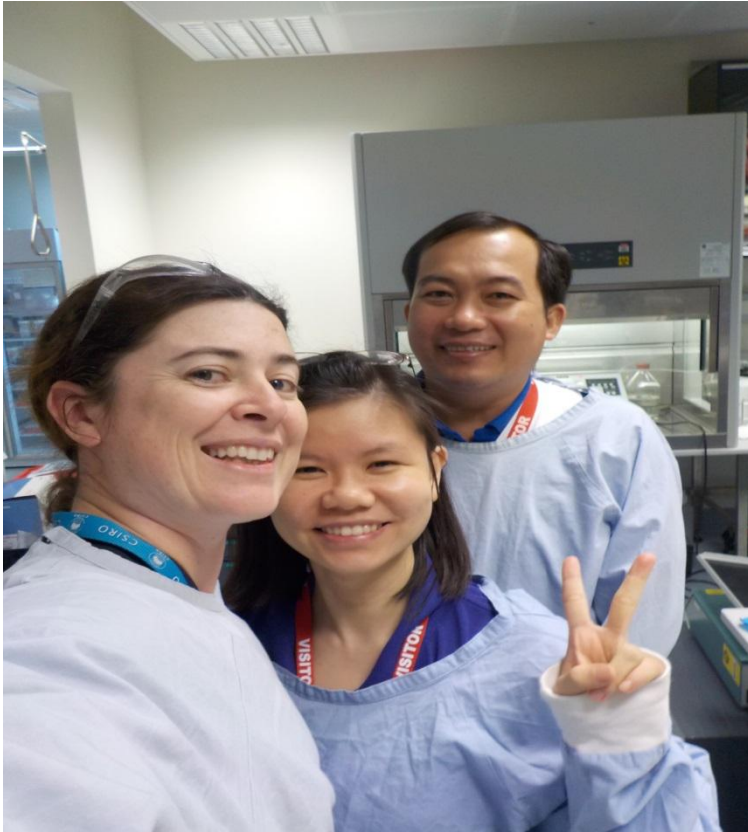
Facilities for ASF testing



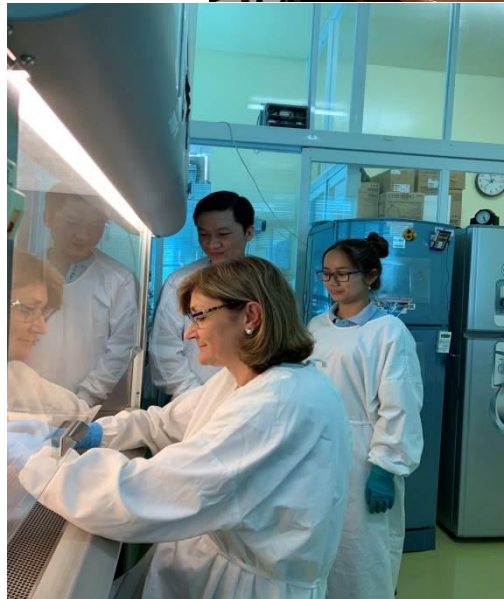
Training staff on ASF testing



Sent key laboratory staff to AALH for trainings on ASF and AALH's expert came to Vietnam to work with RAHO6's laboratory staff



Key laboratory staff at AALH attended the trainings on ASF in 2018



AALH's expert came to Vietnam to work with RAHO6's laboratory staff in Feb 2019

Participated in the PT test ran by AALH in 2013-2014-2015-2016-2017-2018

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South east Asia Regional Proficiency Test 2014 –African swine fever (ASF) virus PCR


CODED REPORT

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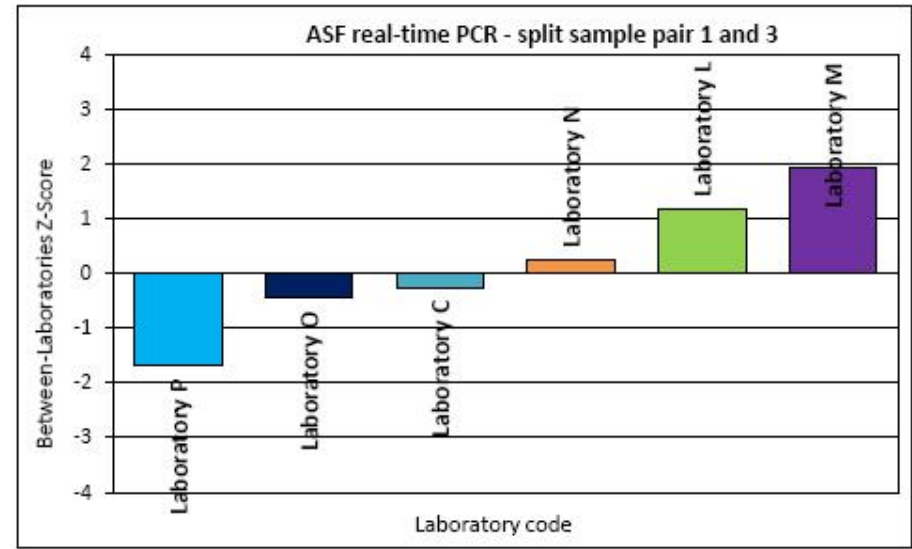
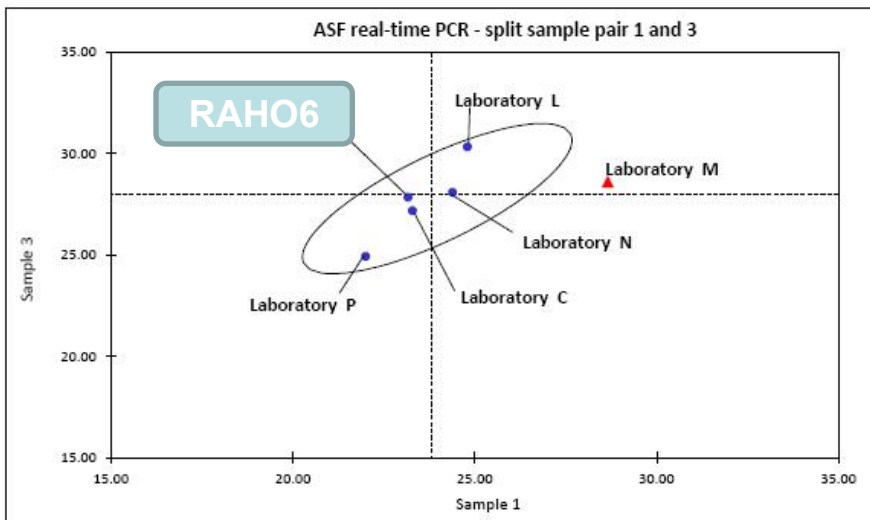


Figure 1: Plot of between Laboratory Z-scores – split sample pair 1 and 3



Mobile laboratory with biosecurity level 3 facilities

Leader of MARD and DAH visit ASF laboratory

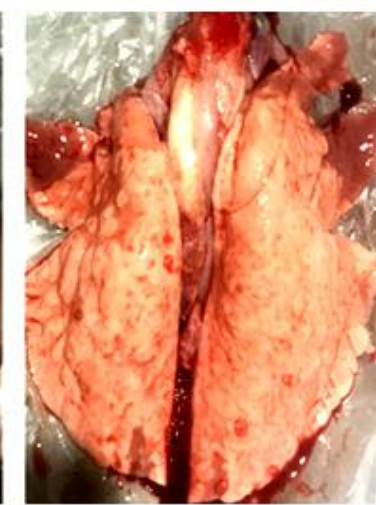


III. FIRST DETECTION OF AFRICAN SWINE FEVER IN VIETNAM

III. First detection of ASF in Vietnam

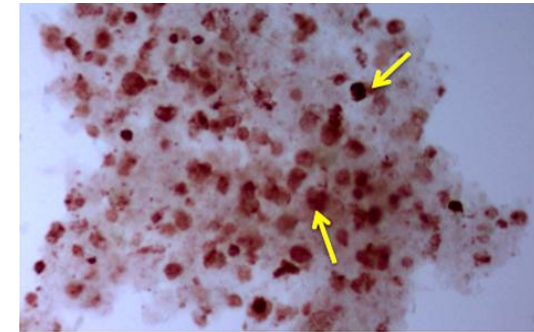
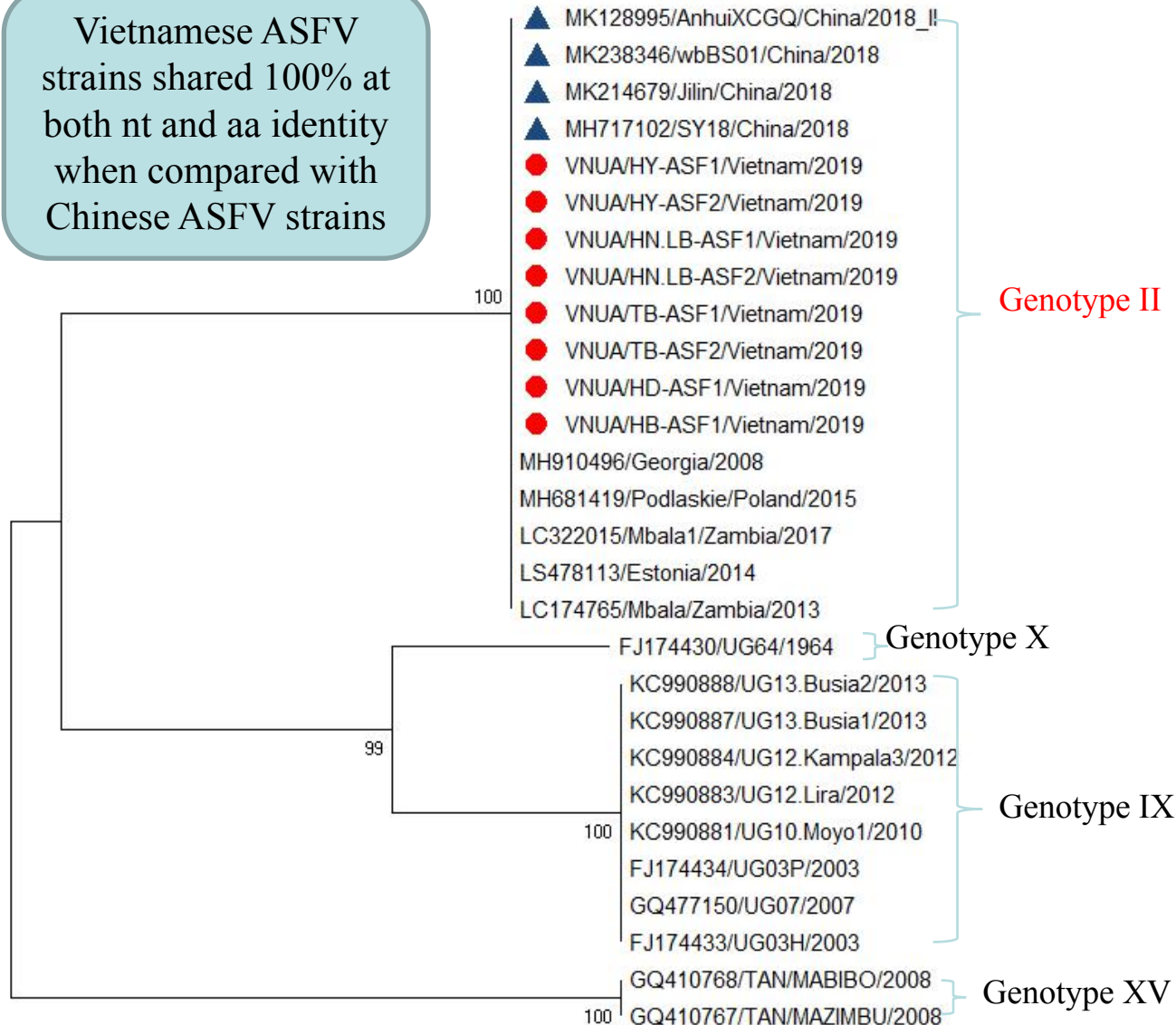
- On 01 Feb 2019, a household in Hung Yen province reported sick pigs with high fever and death pigs, DAH staff visited immediately and took samples that were then tested at four laboratories using different testing protocols (OIE, USDA, AAHL) with various primer sets and probes. **Conclusion ASF positive.**
- Culled all 33 pigs of that household in late afternoon of 01 Feb 2019. Then applied control measures and compensated farmer with 38.000 Dong (1.8 USD) per kg of live pigs
- Then DAH did sequencing the PCR products at two laboratories with confirmation of ASF detection

NECROPSY LESIONS OF THE FIRST ASF OUTBREAK IN VIETNAM (Hung Yen Province- 01/2/2019)



Genetic characterization of ASFV viruses circulating in Vietnam

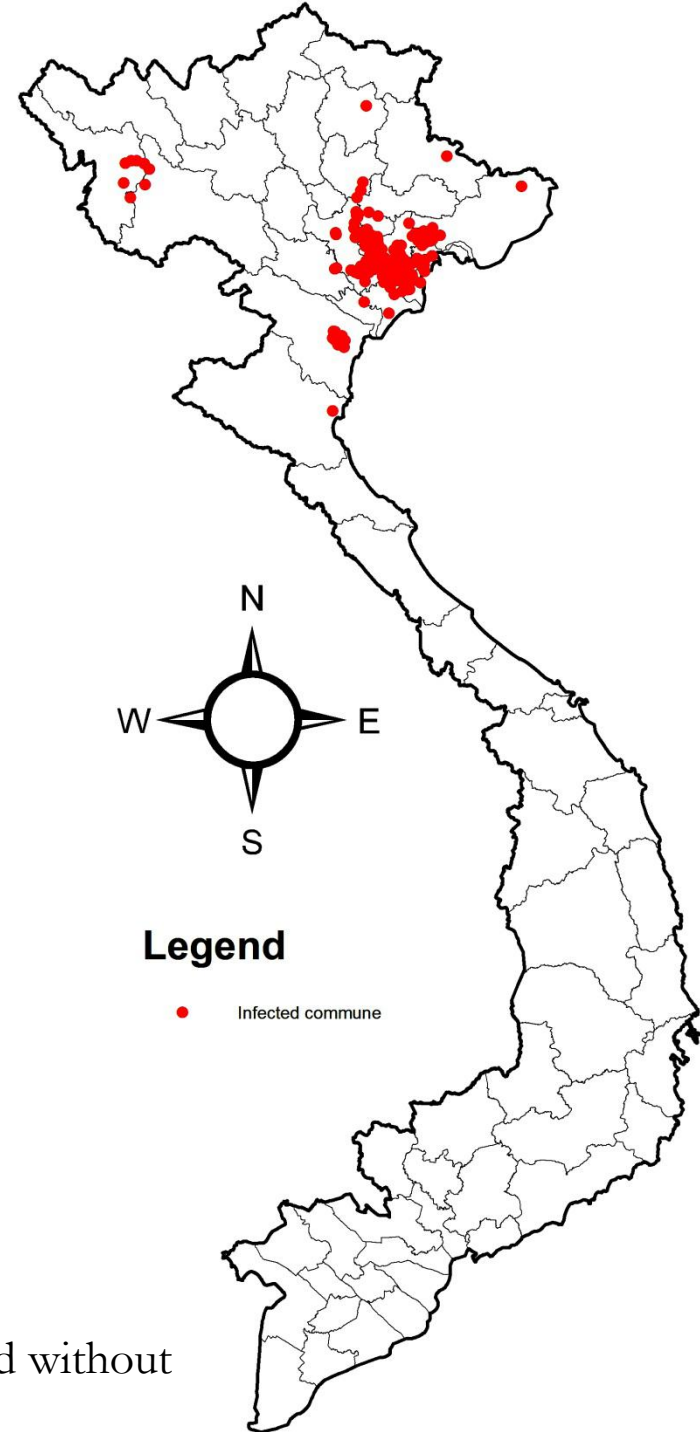
Vietnamese ASFV strains shared 100% at both nt and aa identity when compared with Chinese ASFV strains



AALH's expert worked with DAH's staff to successfully carry out virus isolation

ASF IN VIETNAM

No.	Province	# Infected communes	Last reported onset*
1	Ha Noi	30	29/03/2019
2	Hai Phong	72	28/03/2019
3	Vinh Phuc	1	29/03/2019
4	Bac Ninh	44	29/03/2019
5	Hai Duong	47	29/03/2019
6	Hung Yen	68	29/03/2019
7	Ha Nam	7	28/03/2019
8	Nam Dinh	9	28/03/2019
9	Thai Binh	167	29/03/2019
10	Ninh Binh	1	29/03/2019
11	Bac Kan	1	28/03/2019
12	Lang Son	1	29/03/2019
13	Thai Nguyen	11	28/03/2019
14	Bac Giang	1	29/03/2019
15	Quang Ninh	17	28/03/2019
16	Lai Chau	17	08/03/2019
17	Dien Bien	17	11/03/2019
18	Son La	14	11/03/2019
19	Hoa Binh	2	09/03/2019
20	Thank Hoa	23	13/03/2019
21	Nghe An	4	23/03/2019
22	Quang Tri	1	25/03/2019
23	Thua Thien-Hue	1	25/03/2019



By 8 April 2019, 12 out of 556 infected communes are resolved without any further cases found over last 30 days

Factors related to the introduction and spread of ASF in Vietnam

- Long borders with many thousand people and vehicles cross over the borders daily. Vietnam detected ASF virus in illegal pork products
- International travels to Vietnam with million people who could carry food with
- Virus can maintain well for long time in the environment and pork and death pigs
- All outbreaks (100%) occurred at backyard pig farms so no or low biosecurity; no outbreaks occurred in commercial farms
- None-zoonotic disease so that farmers could did panic selling, especially during Tet and festival events during first months of lunar years
- Transportation, swill feeding, people, etc.

IV. PREVENTION AND CONTROL ACTIVITIES

4.1. Before the first detection of ASF in Vietnam

- On 30 August 2018, Minister of MARD sent the urgent telegraph to request all relevant ministries and provinces to implement all necessary actions for preventing ASF coming to Vietnam
- On 12 September 2018, Prime Minister sent Urgent telegraph to request all relevant ministries and provinces to implement all necessary actions for preventing ASF coming to Vietnam
- On 14 September 2018, Deputy Prime Minister chaired the Video Conference with all relevant ministries and 63 provinces to discuss and request implementation of necessary actions for preventing ASF coming to Vietnam
- Compensation (Degree 02): 38.000 Dong (1.7 USD) per live kg

ĐẢNG CỘNG SẢN VIỆT NAM QUANG VINH MUÔN NĂM



BỘ NÔNG NGHIỆP VÀ PHÁT TRIỂN NÔNG THÔN

HỘI NGHỊ TRỰC TUYẾN

**TRIỂN KHAI CÔNG TÁC PHÒNG, CHỐNG DỊCH BỆNH ĐỘNG VẬT VỤ THU ĐÔNG
VÀ NGĂN CHẶN BỆNH DỊCH TẢ LỢN CHÂU PHI XÂM NHIỄM VÀO VIỆT NAM**

Hà Nội, ngày 14 tháng 9 năm 2018



On 14 September 2018, Deputy Prime Minister chaired the Video Conference with all relevant ministries and 63 provinces to discuss and request implementation of necessary actions for preventing ASF coming to Vietnam



Leader of MARD and relevant ministries checked at border of Lang Son, Quang Ninh

4.1. Before the first detection of ASF in Vietnam

- In Sep. and Oct. 2018, MARD stopped importing pigs and pig products from 3 countries (Poland, Hungary and Belgium)
- On 15 Nov 2018, MARD approved the National Contingency Plan for preventing ASF coming to Vietnam with two main scenarios:
 - **Scenario 1 - ASF is not detected in Vietnam:** Mainly preventing activities such as biosecurity, import control, testing samples of sick pigs, etc.
 - **Scenario 2 - ASF is detected in Vietnam:** Culling infected pig herds, disinfection, surveillance, stop movements, etc.
- DAH has circulated a number of technical guide lines
 - Recognition of ASF; surveillance and testing sick animals, imported products, etc. for ASF
 - A standardized testing protocol using Real-time PCR at all 8 DAH's laboratories



Did exercises on the detection of ASF and application of control measures in December 2018

4.1. Before the first detection of ASF in Vietnam

- Based on the National Contingency Plan, local authorities also developed their own contingency plans for their provinces
- Enhance close monitoring at the borders (main gates and walking lanes) to prevent illegal movement of pig and pig products. Some provinces seized a number of illegal pig movements: All seized pigs and pig products well culled immediately with samples taken.
- Farmers, pig producers have improved their own biosecurity practices at their farms
- Communication and public awareness



4.2. After the first detection of ASF in Vietnam

On 01 February 2019, Minister of MARD sent the urgent telegraph to request all relevant ministries and provinces to implement all necessary actions to control and stop spreading ASF in Vietnam

Leaders of MARD went to all infected areas to lead implementation of control activities

On 12 February 2019, DAH officially declared ASF was firstly ever detected in Vietnam and reported to OIE and FAO

On 20 February 2019, Prime Minister issued a Directive to request all relevant ministries and provinces to implement all necessary actions to control and stop spreading ASF in Vietnam

On 22 February 2019, Minister of MARD sent the urgent telegraph to request all relevant ministries and provinces further enhance strictly movement control of pigs and pig products from infected provinces and from the north to the south of Vietnam

4.2. After the first detection of ASF in Vietnam



Prime Minister, Deputy Prime Minister and Minister of MARD chaired a national video conference with all ministries and provinces to request for application of all necessary measures to control and stop spreading ASF in Vietnam



Weekly
organize the
ministerial
meeting to
update and
discuss
control
measures



National meetings to review the National Action Plan

SUMMARY OF CURRENT CONTROL MEASURES

1. Multiple-ministerial leading

- The Prime Minister established the National Steering Committee with participants are leaders of all relevant 22 ministries. Minister of MARD is Chairman

Frequently meetings and member of the national steering committee visit infected provinces to lead implementation of control activities



- Establishment of the National Task Forces and 7 Regional Task Forces. Leading and good-experienced staff are members of the tasks.

SUMMARY OF CURRENT CONTROL MEASURES

2. Early detection, culling, disinfection and compensation

- Any sick pigs or suspect pigs are sampled and tested for AFS. If positive, declared immediately infected commune to apply strict control measures
- For small farms and household: Cull only all pigs of infected farms; neighbouring farms without any suspect pigs are not culled, but they are under close monitoring until the outbreak is resolved.
- For big farms with many separated pigpens: Culled only all pigs of infected pigpen; pigs in other pigpens can be kept with close monitor or slaughtered for local consumption within infected areas.
- Disinfection is applied to entire the infected and surrounding areas
- The Government of Vietnam decided to compensate at least 80% of the market price for piglets and fattening pigs; for breeding sows and boars is about 1.5 to 2 times higher than that.

SUMMARY OF CURRENT CONTROL MEASURES

3. Movement control

- Pigs and pig products are not allowed to move out the infected areas, except for
- Established more animal quarantine stations on the roads from the North to the South for strict movement control of pigs and pig products.

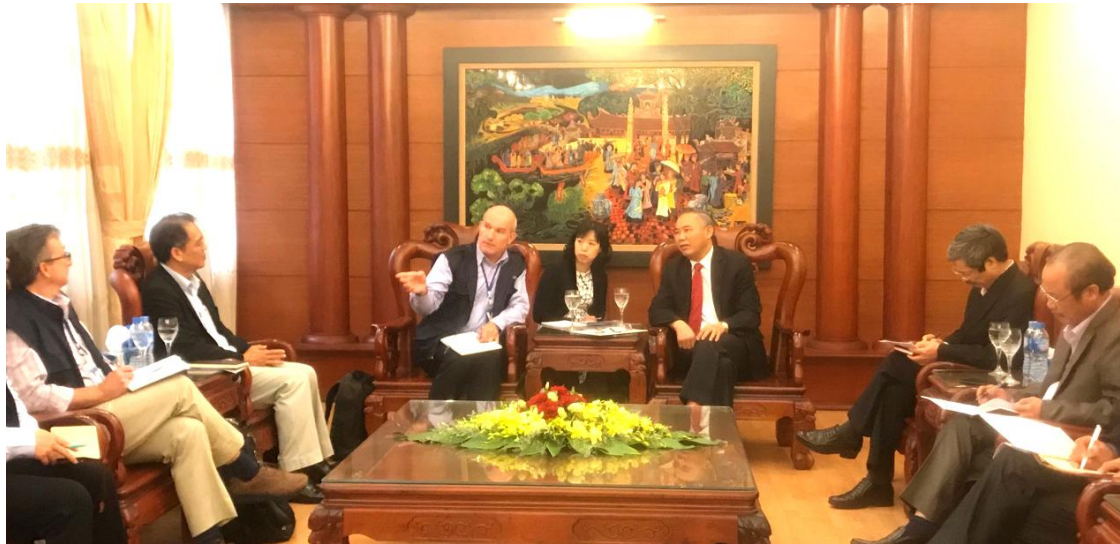
4. Biosecurity application

- Requested all big farms have to apply strict biosecurity measures and frequently cleaning and disinfection of all risk factors
- Re-stock only after the outbreaks is resolved for at least 30 days.

5. Risk communication and public awareness

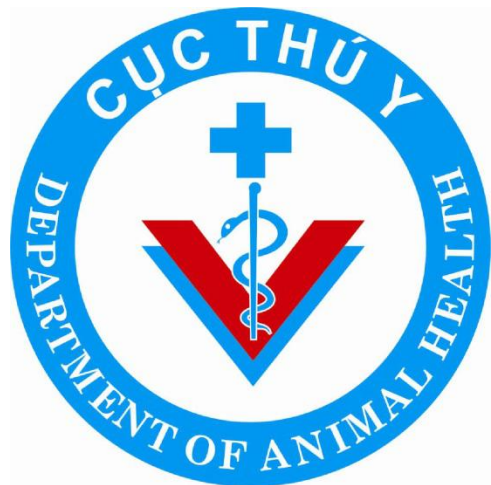
6. Information sharing and international collaboration

- Reported to OIE, FAO; Work with FAO and OIE (EMC mission)
- Frequently communicate with FAO Vietnam for sharing information, outbreak investigation, etc....



ACKNOWLEDGMENTS

- FAO and OIE for close collaboration and support; EMC mission, Dr Pawin and Dr Ken Inui
- Australia Animal Health Laboratory for kind support in laboratory building capacity for ASF
- China Government, FAO and OIE for inviting to this important meeting



THANK YOU VERY MUCH