

# Recap of Day 2



With support from:

中华人民共和国农业农村部  
Ministry of Agriculture and Rural Affairs of the People's Republic of China

4<sup>TH</sup> AFRICAN SWINE FEVER (ASF) COORDINATION MEETING FOR SOUTH-EAST ASIA  
26–28 November 2024, Hanoi, Vietnam



**Session VI**  
**Advances in Development of ASF**  
**Vaccines**

Chair: Dr. Kugita

# Development of WOAHA Guidelines/Standards for ASF modified live vaccines



## Updates on the development of WOAHA Standards on ASF modified live vaccines

Chris Oura, Professor of Veterinary Virology,  
University of the West Indies, Trinidad and Tobago.  
Vice- President, Biological Standards Commission (BSC), WOAHA.

4TH AFRICAN SWINE FEVER (ASF) COORDINATION MEETING  
FOR SOUTH-EAST ASIA  
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An optimal ASF MLV first generation vaccine for the target host should have the following general characteristics (**minimum standards**):

**Safe:** demonstrate absence of fever and clinical signs of acute or chronic ASF in vaccinated and in-contact animals, minimal and ideally no vaccine virus transmission, and absence of an increase in virulence (genetic and phenotypic stability).

**Efficacious:** protects against mortality, reduces acute disease (fever accompanied by the appearance of clinical signs caused by ASF) and reduces vertical (boar semen and placental) and horizontal disease transmission.

**Quality - Purity:** free from wild-type ASFV and extraneous microorganisms that could adversely affect the safety, potency or efficacy of the product.

**Quality – Stability:** – the virus titre maintained throughout the vaccine shelf life that guarantees the efficacy demonstrated by the established minimum immunising (protective) dose.

**Vaccine Matched** - based on the capacity to protect against the genotype II pandemic strain or other genotypes of recognised epidemiologic importance.

## Advancing ASF Vaccine Standards: Next Steps

- BSC to assess the comments (Feb 2025) from the WOAHA Delegates (will receive in Jan 2025) and address them in consultation with WOAHA ASF experts.
- One more round of comments from WOAHA country delegates (April 2025)
- Once concerns addressed, hopefully submit Standard for approval at the WOAHA General Session in May 2025.

### We need to:

- Acknowledge the dynamic nature of Standards and commit to continuous improvement as more data appears.
- Semi-annual reviews and comprehensive literature reviews.
- Collaborative effort – **input from ASF and vaccine experts essential**

**We need to ensure standards are practical, adequate and reflect the latest science**

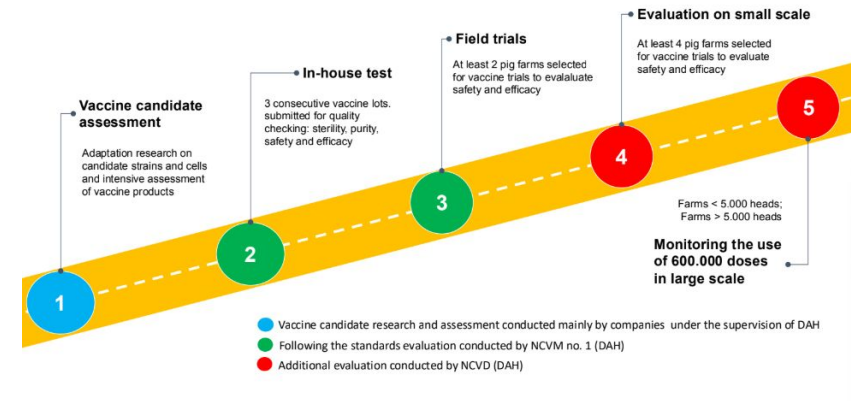
# Feedback from Members using ASF Vaccines



## VIET NAM'S EXPERIENCE ON THE DEPLOYMENT OF ASF VACCINES

Duc-Huy CHU, PhD., DVM  
 Veterinary Drug and Vaccine Management Division  
 Department of Animal Health

### Procedure for ASF vaccine evaluation



### Evaluation parameters

1 Vaccine candidate research and assessment	2 In-house test	3 Field trials	4 Evaluation on small-scale	5 Monitor 600,000 doses
<p><b>1. Back passage study</b></p> <ul style="list-style-type: none"> <li>- Stability of candidate strains;</li> <li>- Reversion to virulence study</li> </ul> <p><b>2. Safety</b></p> <ul style="list-style-type: none"> <li>- Clinical signs</li> <li>- Virus shedding</li> <li>- Viremia</li> <li>- Horizontal transmission</li> <li>- Overdose safety evaluation</li> <li>- Growth performance and ability of the immunity response to other vaccines</li> </ul> <p><b>3. Efficacy</b></p> <ul style="list-style-type: none"> <li>- Antibody response and duration of protective immunity</li> <li>- Challenge study</li> </ul> <p><b>4. DIVA antigen development</b></p> <p>Distinguishing vaccine viruses and wildtype strain</p>	<p>3 consecutive vaccine lots, submitted for quality checking: sterility, purity, safety and efficacy</p> <p><b>1. Visual inspection</b></p> <p>The vaccine is ivory white, the lyophilized cake is spongy, intact, easy to separate from the wall of the vial, easy to dissolve with the vaccine diluent into a homogeneous solution.</p> <p><b>2. Sterility</b></p> <p>No bacteria, fungi growth</p> <p><b>3. Purity</b></p> <p>No cross-infection with FMDV, PRRSV, CSFV, Mycoplasma</p> <p><b>4. Safety</b></p> <p>Overdose safety evaluation</p> <p><b>5. Efficacy</b></p> <p>Challenge study, Antibody response</p>	<p>At least 2 pig farms selected for vaccine trials to evaluate safety and efficacy</p> <p><b>1. Screening test in field</b></p> <p>No infection with FMDV, PRRSV, CSFV, Mycoplasma in pig herd</p> <p><b>2. Safety</b></p> <ul style="list-style-type: none"> <li>- Overdose safety evaluation</li> <li>- Clinical signs</li> <li>- Virus shedding</li> <li>- Viremia</li> </ul> <p><b>3. Efficacy</b></p> <ul style="list-style-type: none"> <li>- Antibody response</li> <li>- Challenge study</li> </ul>	<p>At least 4 pig farms selected for vaccine trials to evaluate safety and efficacy</p> <p><b>1. Screening test in field</b></p> <p>No infection with FMDV, PRRSV, CSFV, Mycoplasma in pig herd</p> <p><b>2. Safety</b></p> <ul style="list-style-type: none"> <li>- Clinical signs</li> <li>- Virus shedding</li> <li>- Viremia</li> </ul> <p><b>3. Efficacy</b></p> <ul style="list-style-type: none"> <li>- Antibody response</li> <li>- Challenge study</li> </ul>	<p><b>Monitoring the use of 600,000 doses in large scale</b></p> <p>Post vaccine monitoring: systemic and adverse reactions, clinical signs, antibody response and coverage</p>

# Feedback from Members using ASF Vaccines

AVAC ASF LIVE vaccine - an effective solution for preventing African swine fever

DVM. PhD. NGUYEN VAN DIEP, CEO AVAC



Hanoi, November 27, 2024



AVAC VIETNAM Joint Stock Company

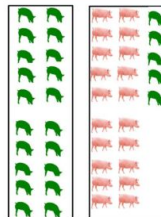
Nguyen Van Diep et. al

## 1. Introduction of AVAC ASF LIVE vaccine

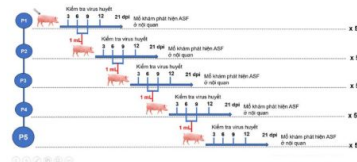
No virus shedding through secretions

dpi	Result			
	blood	Feces	Urine	Oral
7	+	-	-	-
14	+/-	-	-	-
21	-	-	-	-
28	-	-	-	-
56	-	-	-	-
84	-	-	-	-
112	-	-	-	-
140	-	-	-	-

No transmission to co-mingled pigs

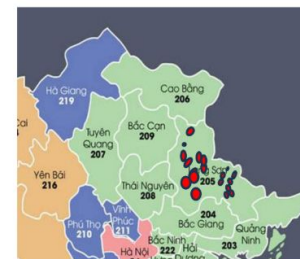


No re-virulence through 5 passages



All alive healthy

## Control of ASF by mass vaccination in Lang Son



- 6/2024, AVAC donated 2200 doses
- Sub-DAH Lang Son, on 25-26/Jun/2024, vaccinated 2.003/2.265 in 3 communes of Bac Son district.
- Healthy after vaccination. Only 6/9 pigs (one household) died after a few days post vaccination
- No more outbreak reported



AVAC VIETNAM JSC

# Feedback from Members using ASF Vaccines



# **Session VII**

## Enhancing ASF Prevention and Control

Chair: Dr. Abila

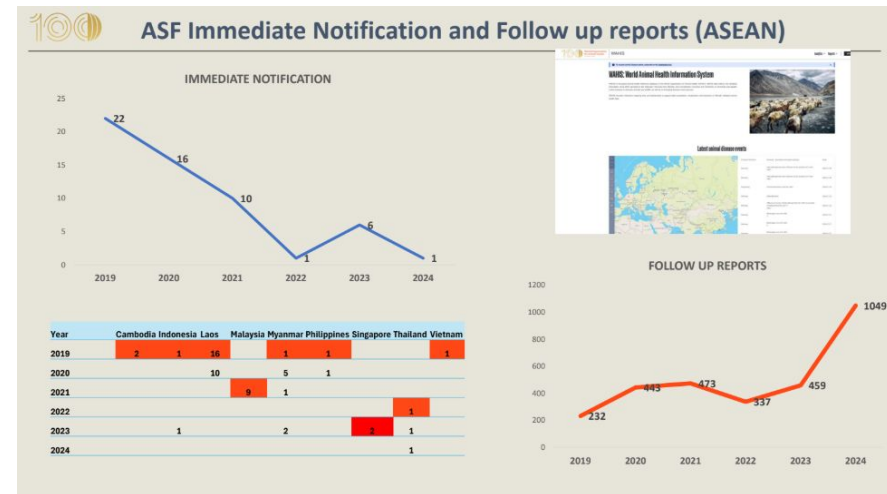
# WOAH Standards and guidelines on ASF (Surveillance, biosecurity and compartmentalization)

WOAH standards and guidelines on African Swine Fever



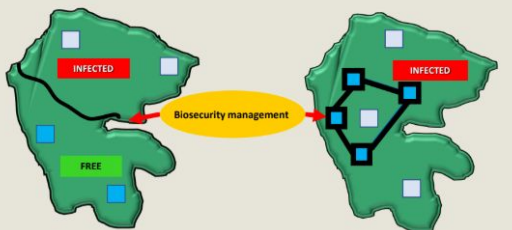
Dr Bolortuya Purevsuren  
WOAH SRR SEA

100 World Organisation for Animal Health Founded in 1924  
100 Organisation mondiale de la santé animale Fondée en 1924  
100 Organización Mundial de Sanidad Animal Fundada en 1924



100 Zoning and compartmentalisation

Zoning and Compartmentalisation application



**Zoning**  
Zones are primarily defined based on geography (e.g. natural or legal boundaries)

**Compartmentalisation**  
Compartments are primarily defined by biosecurity management practices

- Assist Member Countries wishing to **establish and maintain different subpopulations** within their territory
- Applied in accordance with the measures in the **relevant disease chapter(s)**
- To regain free status** following a disease outbreak, follow the recommendations in the relevant disease chapter
- Outlines a process through which trading partners may recognize such subpopulations, best implemented by gaining agreement **prior to outbreaks**



# Case Report: ASF surveillance and reporting



## AFRICAN SWINE FEVER SURVEILLANCE

**BUREAU OF ANIMAL INDUSTRY**  
Animal Health and Welfare Division  
National African Swine Fever Prevention and Control Program

## DIFFERENT SURVEILLANCE

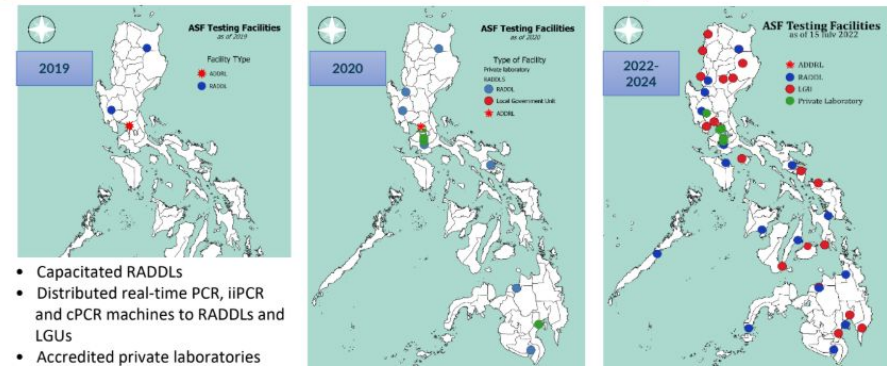


- Certificate of Free Status on ASF
- Recognition of Active Surveillance for ASF
- Slaughterhouse surveillance
- Sentinel Surveillance
- Negative Disease Monitoring
- Active case findings

## OTHER ACTIVITIES



### Increased testing capabilities across the country



Immediate testing for early disease response

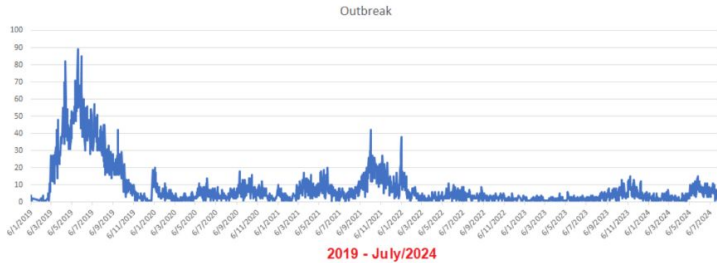
# Case Report: Implementation of compartmentalization guidelines



## AFRICAN SWINE FEVER SITUATION AND SWINE DISEASE FREE ZONES IN VIET NAM

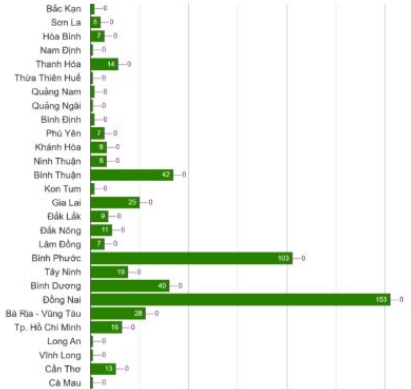
Hanoi, 27 November 2024

ASF situation



### ASF free status

- No ASF free zone has been recognized
- A total of 529 farms in 28 provinces are certified as ASF free



# Case Report: Implementation of biosecurity as main tool for ASF control

Starting the construction of ASF-free compartment since 2019



4<sup>th</sup> ASF coordination meeting for South-East Asia  
26-28 Nov. 2024, Hanoi, Vietnam



Implementation of biosecurity measures  
as main tool for ASF control in China

Dongming Zhao and Zhigao Bu

National African Swine Fever Para-Reference Laboratory  
National Highly Containment Facilities for Animal Infectious Diseases Control and Prevention  
State Key Laboratory for Animal Disease control and Prevention  
Harbin Veterinary Research Institute of Chinese Academy of Agricultural Sciences



It is a successful practice of advanced concepts and basic methods for regional management of animal diseases in China's pig farming industry.

Data from CAHEC

Prevention and Control for Farm Level

**Full coverage sampling:** Conduct full coverage sampling on all internal walls, floors, equipment, and other surfaces on a block by block basis;

**Key point sampling:** As a supplement to the full coverage sampling method, it includes difficult to collect locations such as dead corners and the bottom of the material trough



Data from CAHEC

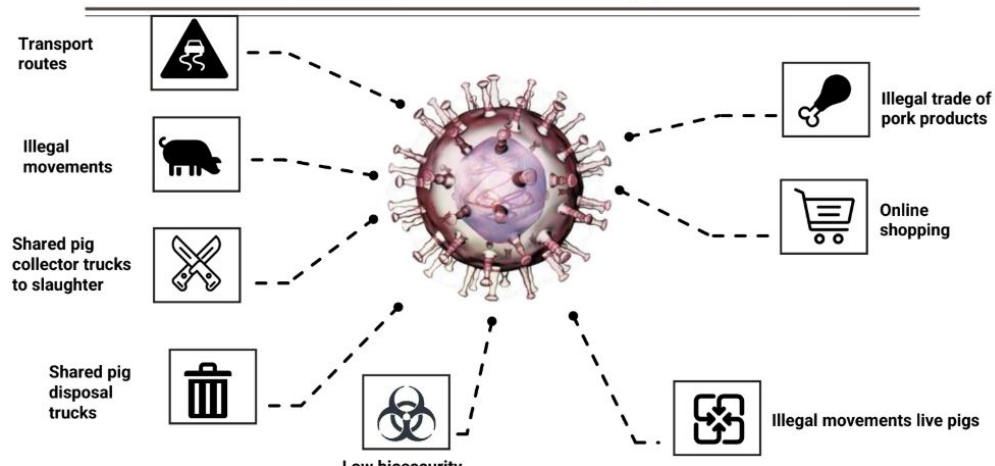
Session VIII:  
Introduction to  
ASEAN ASF Prevention and  
Strategy and status of its  
implementation

# ASF risk assessment and development of Risk-based ASF Control Strategy for Malaysia



## RISK FACTORS IN PENINSULAR MALAYSIA

Related to the pig value chain



**Scenario 2:**  
**Living with the disease**

- Acceptance that the disease is in some subpopulations
- Exploration of strategies to limit spread for business continuity
- Community apply effective measures to limit spread
- Vaccines may be used to slow down spread
- Some zoning and compartmentalisation
- Some PPP collaboration

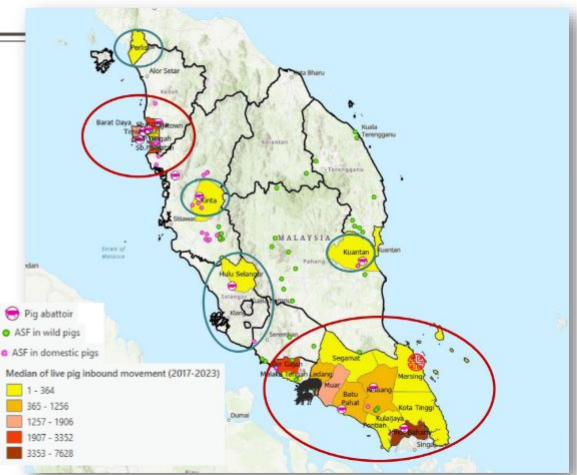
Sequentially....

Breeding zone: JOHOR

Rearing zone: PENANG

MIX: PERAK

WILDLIFE: PAHANG and TERENGGANU



# Introduction to ASF Prevention and Control Strategy



## ASEAN ASF Prevention and Control Strategy

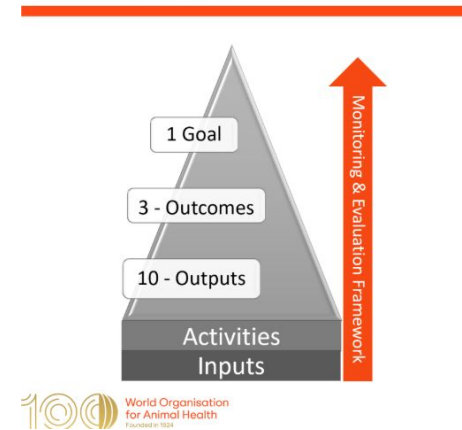
Karma Rinzin  
Regional Animal Health Coordinator  
WOAH Sub-Regional Representation for South-East Asia

Fourth ASF Coordination Meeting for South-East Asia  
Hanoi, Vietnam  
26 – 28 November 2024

## ASEAN ASF Prevention and Control Strategy



## Theory of change



Theory of Change - ASEAN ASF Prevention and Control Strategy

<p><b>Goal</b> To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild swine populations in Southeast Asia</p>			
<ul style="list-style-type: none"> <li>Reduction in the number of countries and territories affected by ASF</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of the number of ASF outbreaks within affected countries and territories</li> </ul>	<ul style="list-style-type: none"> <li>Increased number of ASF that implement zoning and compartmentalisation</li> </ul>	<ul style="list-style-type: none"> <li>Increased number of multilateral collaboration for ASF prevention and control</li> </ul>
<p><b>Problem statement</b> ASF is critical to food security with negative socio-economic impact. The ASF also causes adverse impact on wild swine populations in Southeast Asia.</p>			
<p><b>Objectives</b></p>			
<p><b>Objective 1</b> Strengthen regional coordination and cooperation framework for ASF and other TADs control</p>	<p><b>Objective 2</b> Improve capability of ASEAN Member States to control ASF and other TADs</p>	<p><b>Objective 3</b> Ensure the effectiveness and sustainability of ASF prevention and control</p>	
<p><b>Outputs</b></p>			
<p>1.1 Set up ASEAN ASE Governance Structure</p> <p>1.2 Enhance Regional Coordination Mechanism in the with GS-TADs and other relevant frameworks</p> <p>1.3 Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information</p>	<p>2.1 Systematic evaluation of the capability of Veterinary Services, in particular to control ASF</p> <p>2.2 Apply Multinational and Multidisciplinary partnerships for ASF prevention and control including facilitation of safer trade</p> <p>2.3 Capacity building programmes to prevent and control spread of ASF and priority TADs</p> <p>2.4 Strengthen legislation and policy on prevention and control of ASF and other TADs</p>	<p>3.1 Strengthen engagement and coordination with relevant stakeholders, including private sector</p> <p>3.2 Apply Multinational and Multidisciplinary partnerships to control ASF and other priority TADs</p> <p>3.3 Promote a sustainable funding mechanism for ASF prevention and control</p>	
<p><b>Outcomes</b></p>			
<p><b>Outcome 1</b> Regional coordination and cooperation for more effective prevention and control of ASF is improved.</p>	<p><b>Outcome 2</b> The ASEAN region has enhanced capacity for early detection and rapid response to PPR1 incursions and other priority zoonotic diseases.</p>	<p><b>Outcome 3</b> The animal health workforce in the ASEAN region has enhanced capabilities for risk assessment, surveillance, PPS detection and emergency response.</p>	

# Group Work

## Group work – Develop implementation plan

Activities number	Activities	Activity type	Implementer	Collaborator	2023	2024	2025	2026	2027	2028	Fund source	Remarks
<b>Goal</b>	To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia through multi-stakeholder cooperation and promotion of cooperation amongst the ASEAN Member States (AMS).											
<b>Outcome 1</b>	Regional coordination and cooperation for more effective prevention and control of ASF is improved											
<b>Output 1.1</b>	Set up ASEAN ASF Governance structure											
Activity 1.1.1	Explore the ASF coordination mechanism with clear ToR to coordinate the implementation of the strategy-	Meeting	ACCAHZ/ ASEC/ AMS/ Partners	FAO, WOAH	x							Develop TOR
Activity 1.1.2	Designation of ASEAN ASF Reference Laboratory	Meeting recommendations	ASWGL	AMS, WOAH, FAO	x							Vietnam designated
Activity 1.1.3	Designation of ASEAN Co-lead countries for ASF	Meeting recommendations	ASWGL	AMS, WOAH, FAO	x							Philippines and Vietnam
	<b>Add new activities</b>											
<b>Output 1.2</b>	Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks											
Activity 1.2.1	Conduct ASWGL/ ACCAHZ meeting back to back with Sub-Regional GF-TADs Meeting	Meeting	ASEC, ACCAHZ, WOAH, FAO			x	x	x	x	x		
	Participate in annual Standing Group of Experts on ASF for Asia and the Pacific	Meeting	WOAH, FAO	AMS, ASEAN	x	x	x	x	x	x		
	Engage and support SGE recommended activities	Based on the meeting recommendations	ASEAN, AMS	WOAH, FAO	x	x	x	x	x	x		

# Hosted Dinner



# Karaoke night!