

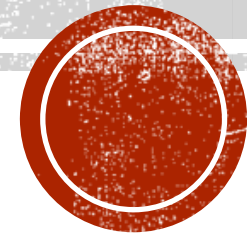
# Myanmar

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## Country report on swine disease

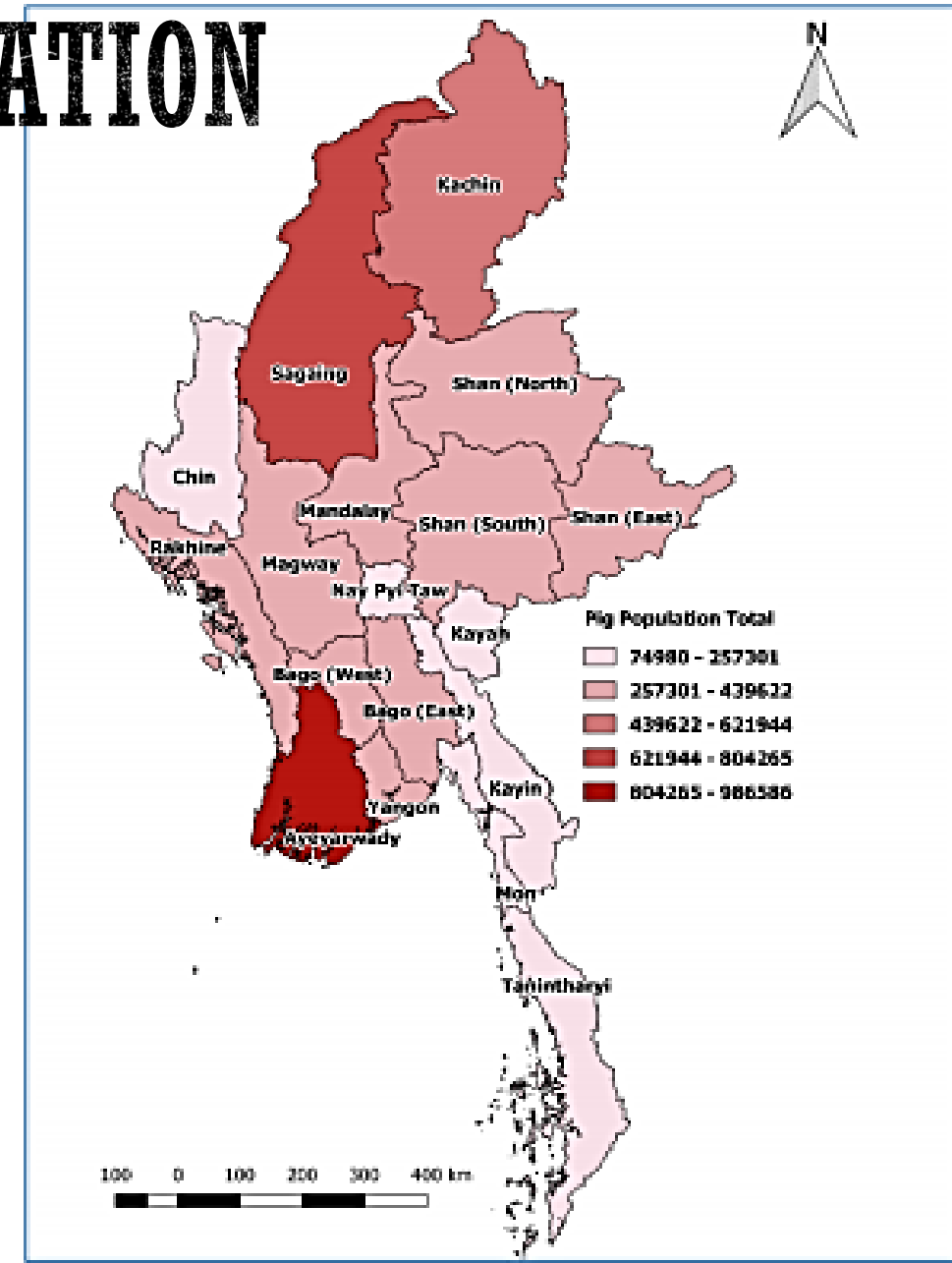
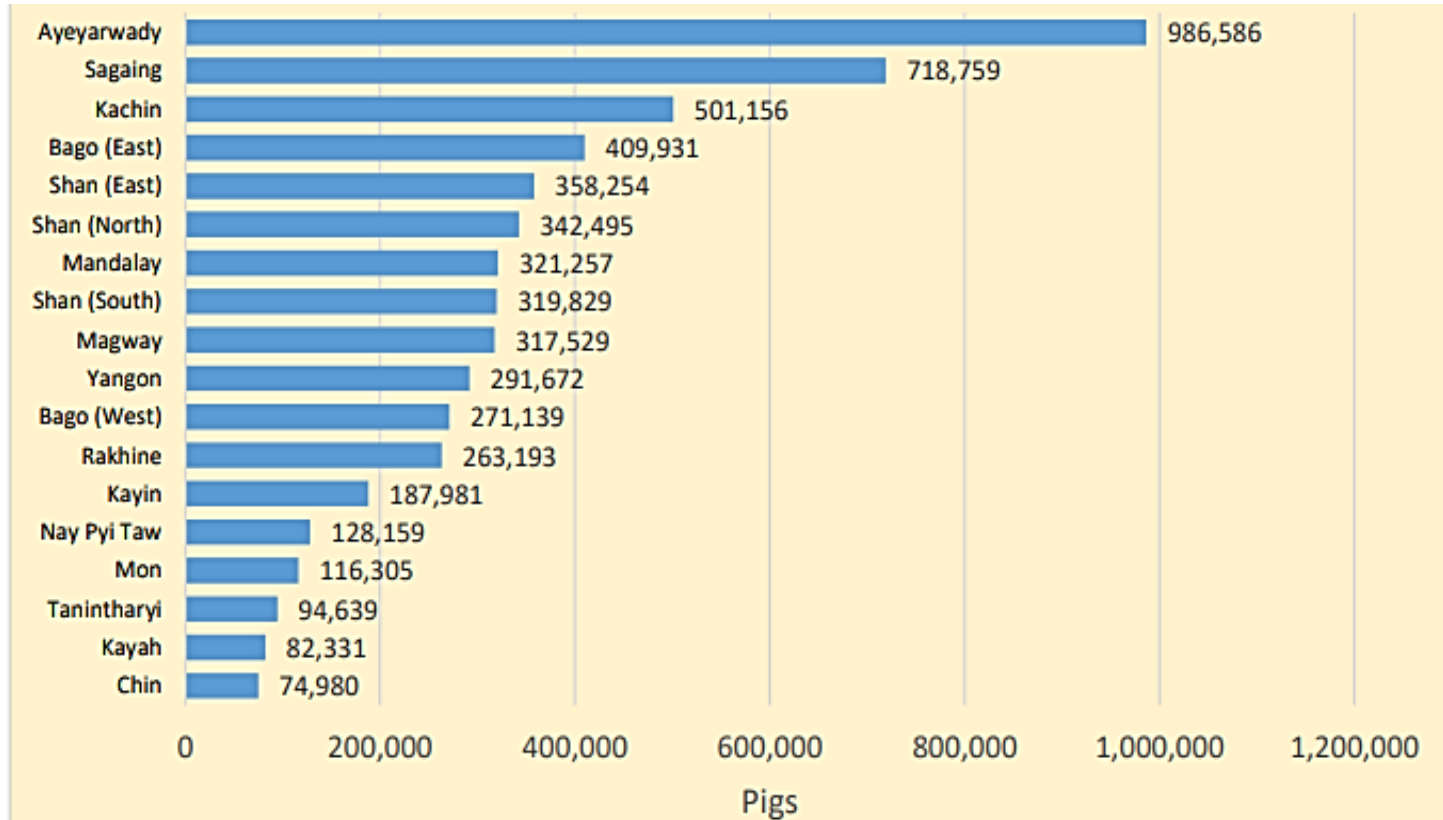
OIE Regional virtual training on swine disease laboratory diagnosis

3-4 November 2020



# BACKGROUND INFORMATION

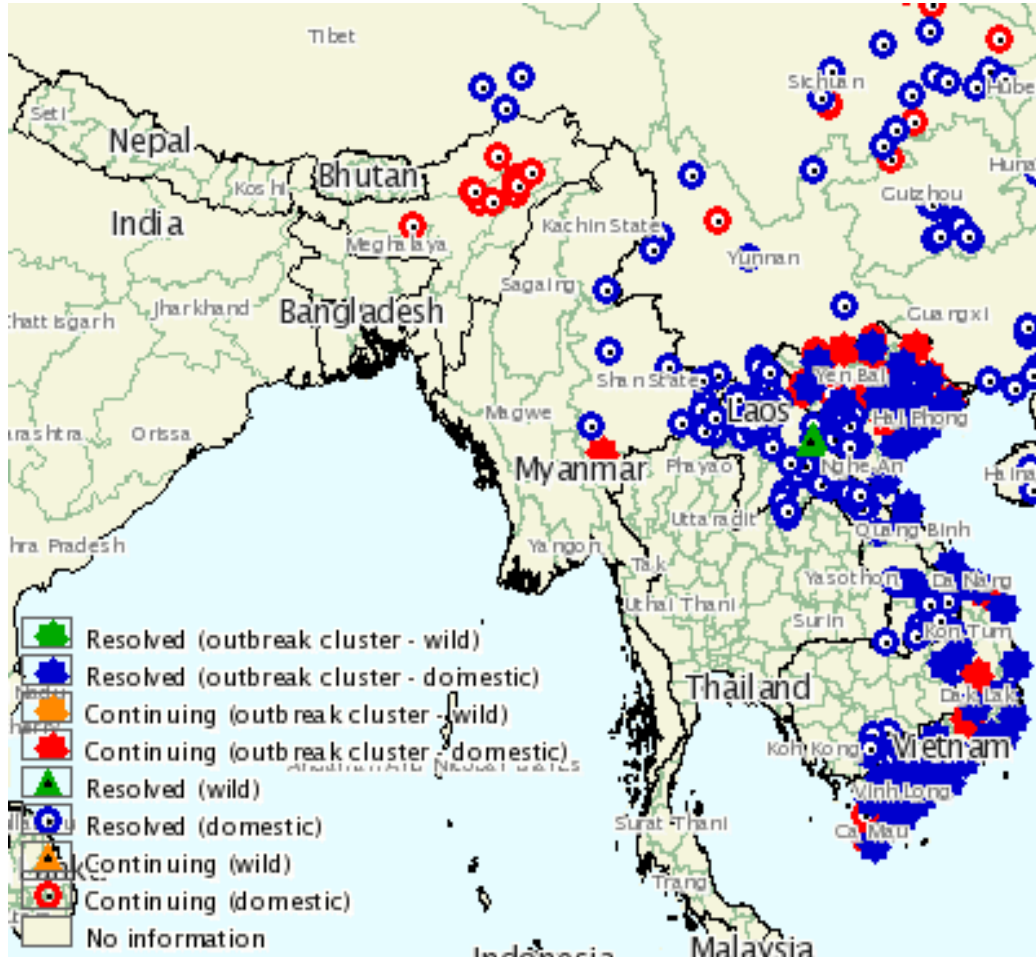
## Pigs total population



Over two-million holdings raised 5.8-million pigs with an average of about nearly three pigs per holding.



# UPDATES ON ASF SITUATION



**1<sup>st</sup> ASF Outbreak**  
(1.8.2019)

**2<sup>nd</sup> ASF Outbreak**  
(10.8.2019)

**3<sup>rd</sup> ASF Outbreak**  
(11.8.2019)

**4<sup>th</sup> ASF Outbreak**  
(13.9.2019)

**5<sup>th</sup> ASF Outbreak**  
(6.2.2020)

**6<sup>th</sup> ASF Outbreak**  
(22.2.2020)

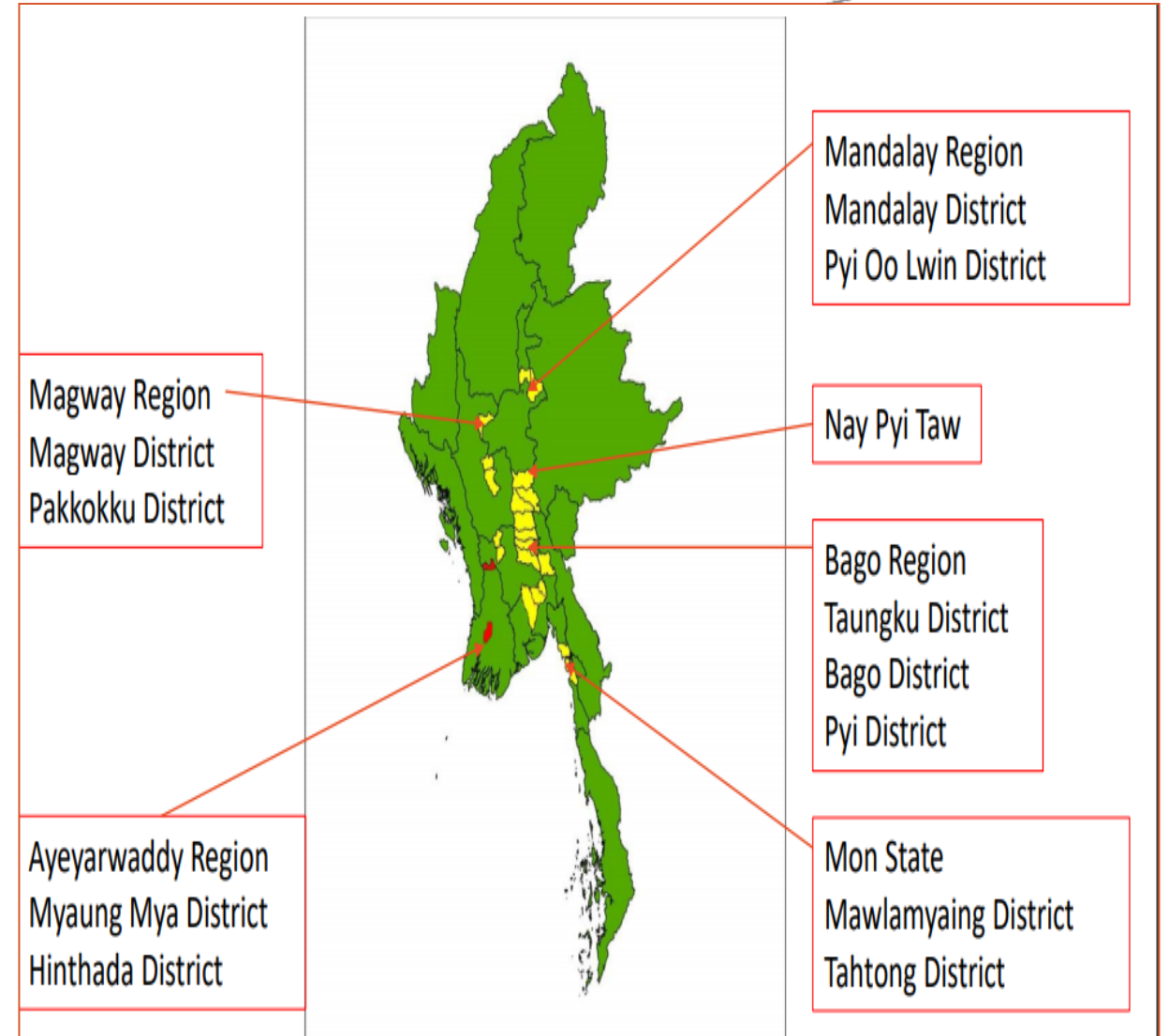
**7<sup>th</sup> ASF Outbreak**  
(9.6.2020)

**8<sup>th</sup> ASF Outbreak**  
(9.7.2020)



# UPDATES ON PRRS DISEASE SITUATION

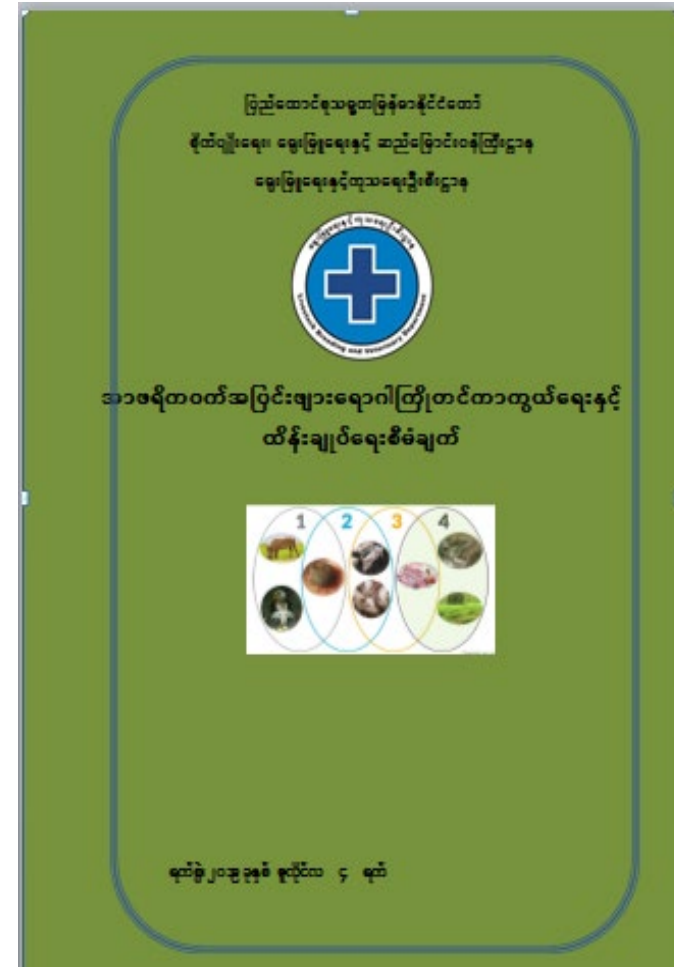
- First outbreak in Mandalay region , since 15 February 2011 affecting 559 pigs and 210 died.
- On April 7, Pobba Thiri and Zabu Thiri townships in Nay Pyi Taw were infected with this disease.
- And spread to Magway region, Bago region , Ayeyarwaddy region and Mon State.



# DISEASE PREVENTION AND CONTROL



- Contingency Planning
- Legislation (Listed as Notifiable disease)
- Awareness
- International Collaboration (FAO, OIE)
- Simulation exercises
- Surveillance
- Movement control (illegal)
- Strengthening border control for illegal pig products
- Laboratory capacity building
- Biosecurity (farm/trade/slaughter)
- Rapid Response Team (Communication/ Net working)
- Transparency (OIE reporting)
- Directive order for restocking
- Directive order for pig transportation





# SWINE DISEASES DIAGNOSIS

No.	Swine Diseases	Diagnosis		
		Virus Isolation	ELISA	Molecular
1	African Swine fever (ASF)		√	√
2	Classical Swine Fever	√	√	√
3	Foot and Mouth Disease (FMD)	√	√	√
4	Porcine Respiratory and Reproductive Syndrome (PRRS)	√	√	√
5	Porcine Epidemic Diarrhea (PED)	√	√	√
6.	Porcine Circo Virus Type 2 (PCV2)	√	√	√
7.	Swine Influenza Virus (SIV)	√	√	√



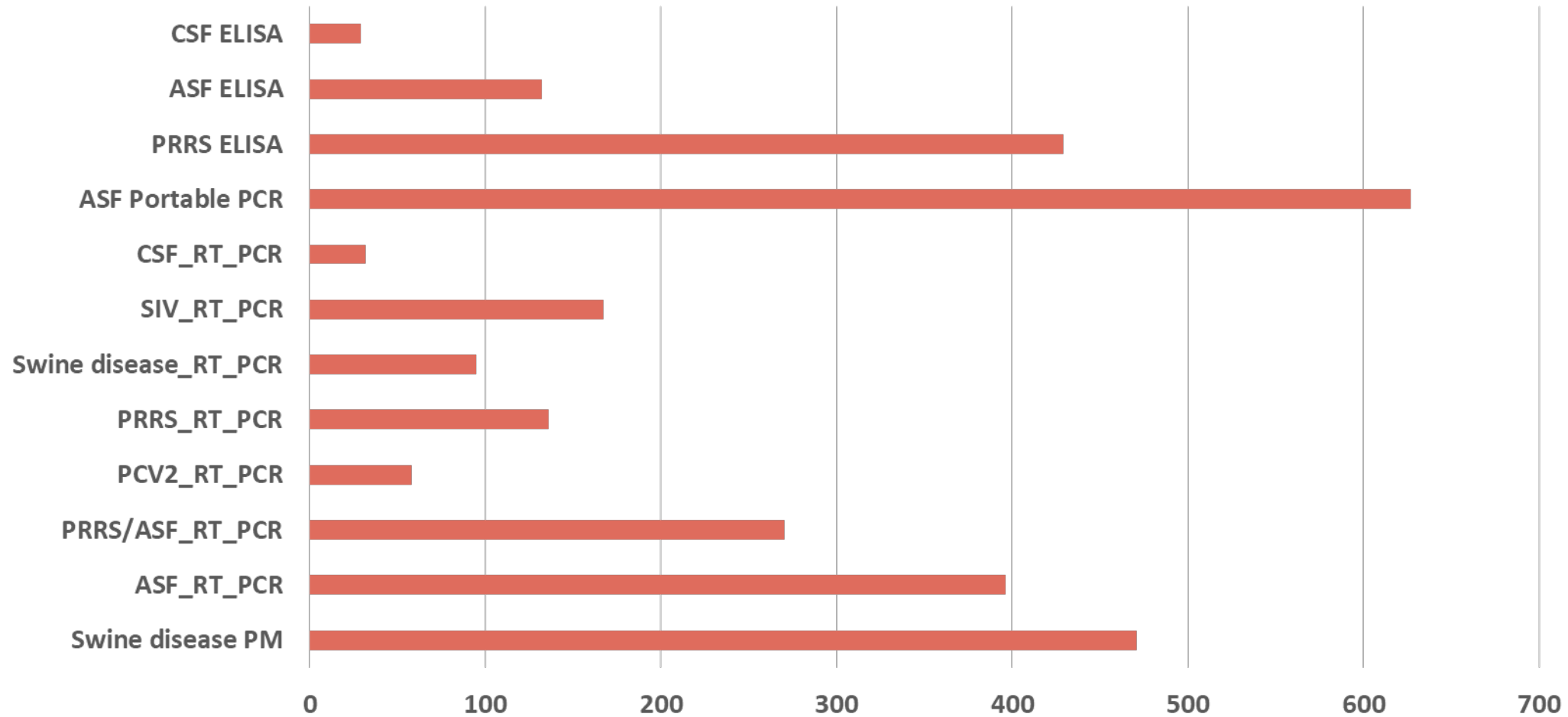
# SWINE DISEASES DIAGNOSIS



No.	Test	Type of Sample			
		Serum	Swab	I.O	Others
1	<b>Rapid test kit</b>				
	ASF	√			
2	<b>Real time PCR</b>				
	PRRS		√	√	√
	PCV <sub>2</sub>	√	√	√	√
	CSF	√	√	√	√
	ASF	√	√	√	√
	SIV			√	√
3	<b>Conventional PCR</b>	√	√	√	√
4	<b>Portable PCR</b>				
	ASF	√	√		√
5	<b>ELISA</b>				
	ASF	√	√		
	PRRS	√			



# SWINE DISEASES DIAGNOSIS CAPICITY





# WHAT WORK WELL



Activities which may help strengthen your laboratory capacity in disease diagnosis

- Physical trainings from specific diseases.
  - Laboratory diagnosis of most specific pathogens (eg. Bacteria)
  - Molecular, WGS training for bacteriology test.
  - MIC testing for AST tests.
  - Training for diagnosis of fastidious bacteria.
  - GLP
  - QA system
  - Laboratory Mapping Tool
  - Internal auditing
  - Preparation of SOPs



# WHAT WORK WELL



- Laboratory itself trying to get the ISO accreditation, so laboratory has been writing SOP.
- A comprehensive quality system with an electronic laboratory information management system is trying to established.
- External Proficiency tests are being participated organized by Int. organization. (specific disease)
- Internal Proficiency tests are being practiced regularly between LBVD labs. (most tests)
- Laboratory ensures for its test validation by conducting research works with inter organization. Test method are regularly reviewed originated from various sources: instrument manufactures, universities, other organization and individual. Lab equipment are calibrated with in-house method and regularly calibrate by Int. organization.
- Keeping an original data in electronic and hard copy for the reason of tracilibility.



# CHALLENGE AND WAY FORWARD



## Main limitation

- Capacity building (Staff need to be trained)
- Limited lab equipment.
- Apart from virology diagnosis, molecular diagnostic technique can't be performed for bacteriology, parasitology tests.
- There is no e-system for test and data sharing between laboratories.
- Although two ref lab can establish digital documentation system, other labs still using paper based system which is difficult to trace back.

