



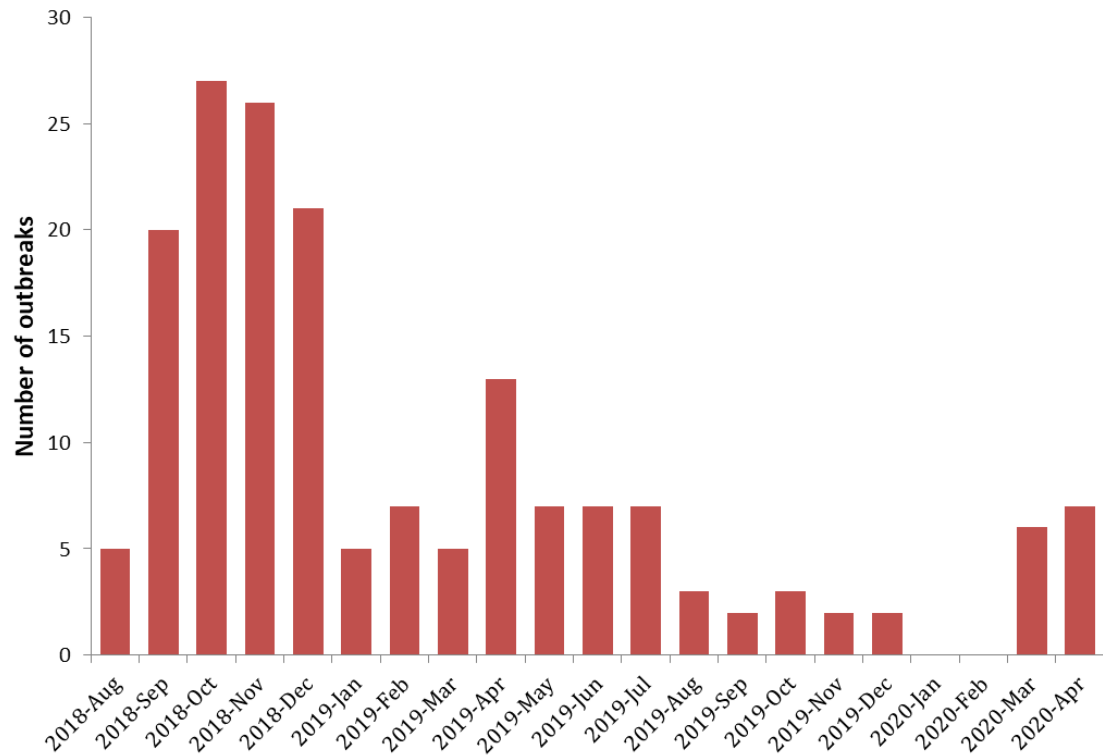
# ASF Outbreak Management Approaches in China

Xu Quangang, CAHEC,  
2020.4.21

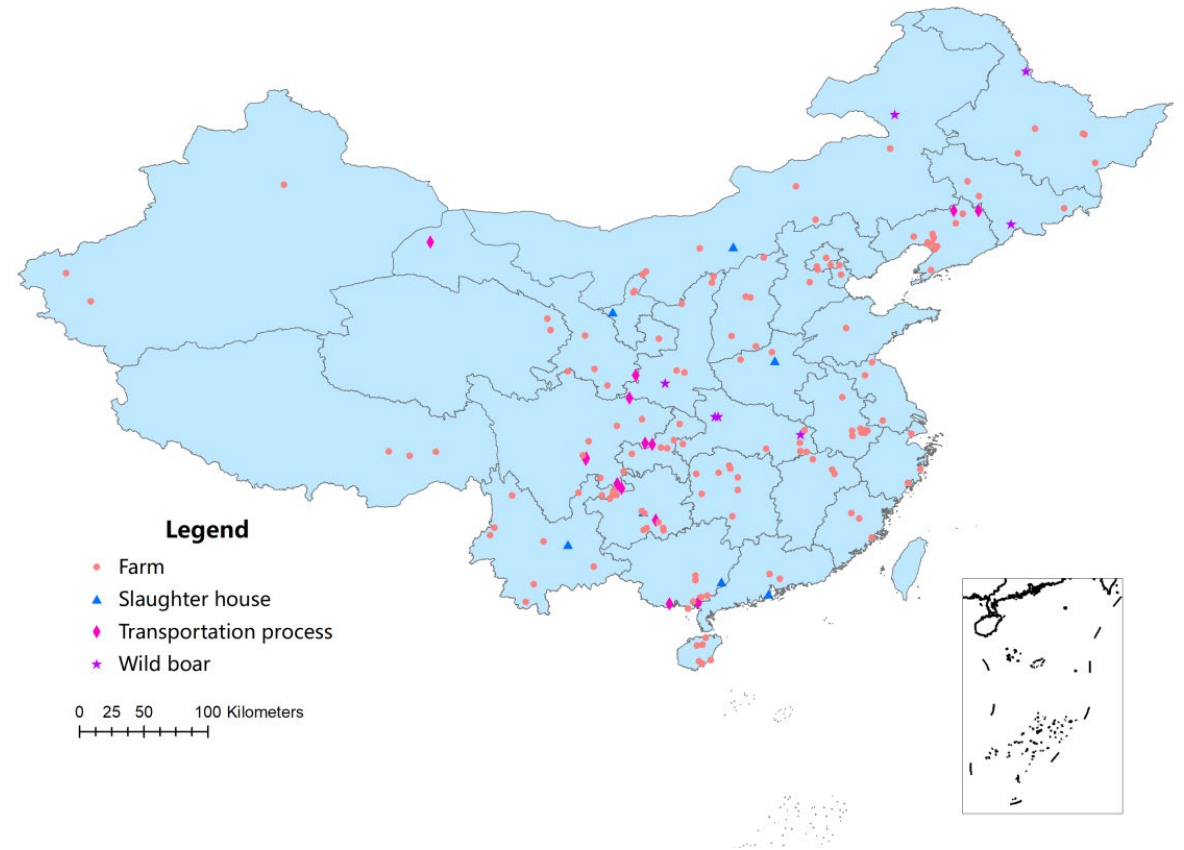




# **ASF Situation**



Temporal distribution of outbreaks

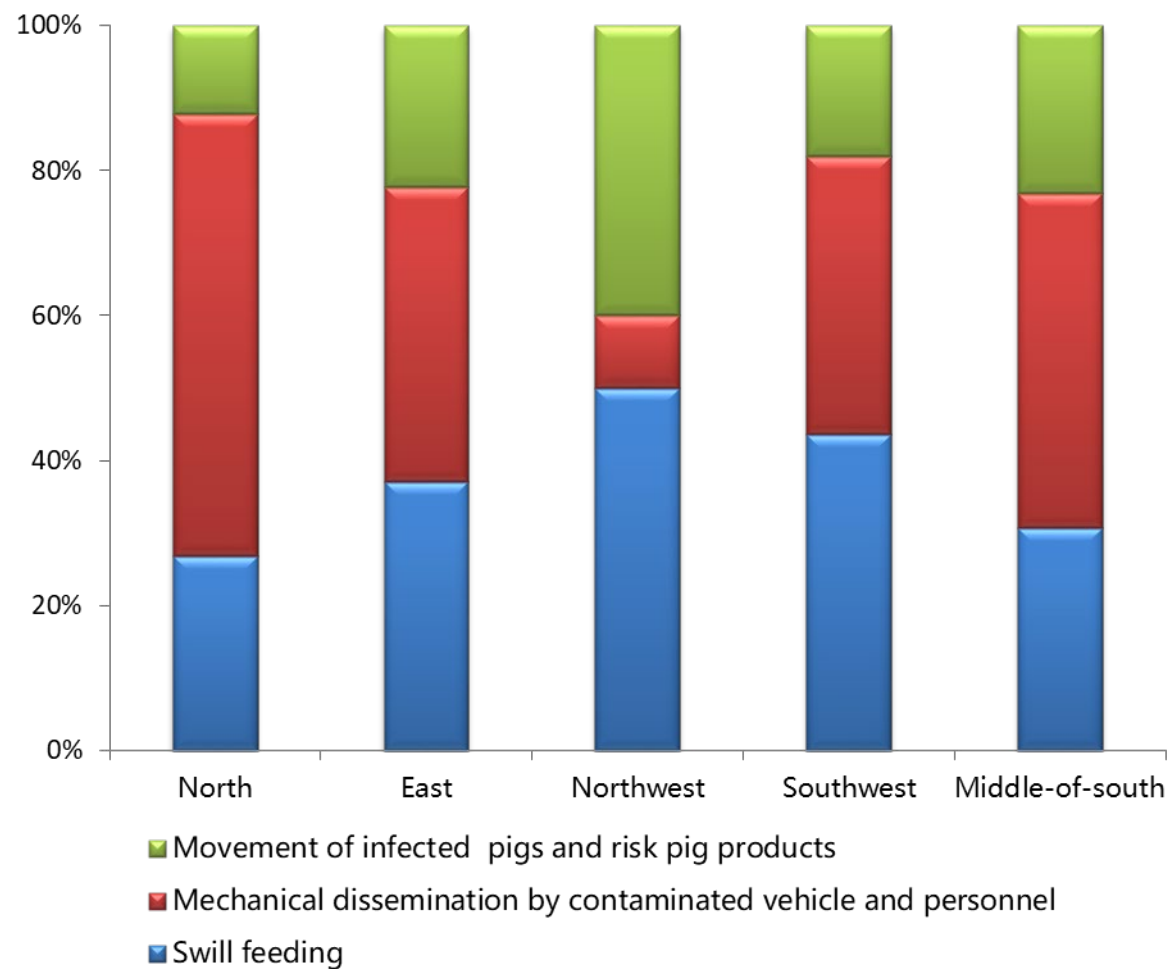


Spatial distribution of outbreaks

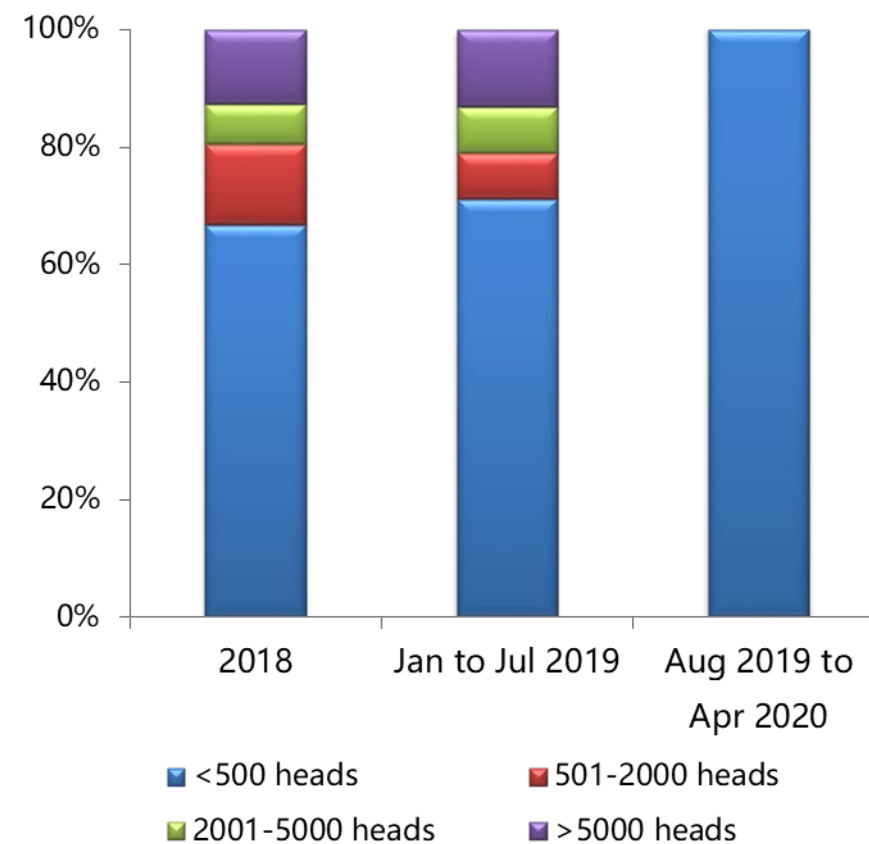
By 21<sup>st</sup> Apr-2020, 21 months, 31 provinces, 175 outbreaks (6 wild boar outbreaks)

## Transmission routes for 153 outbreaks (with clear results) of domestic pigs

	Swill feeding	Movement of infected pigs and risk pig products	Mechanical dissemination by contaminated vehicle and personnel
Outbreaks	58	33	62
Proportion	37.9 %	21.6 %	40.5 %



Transmission routes of ASF in different regions

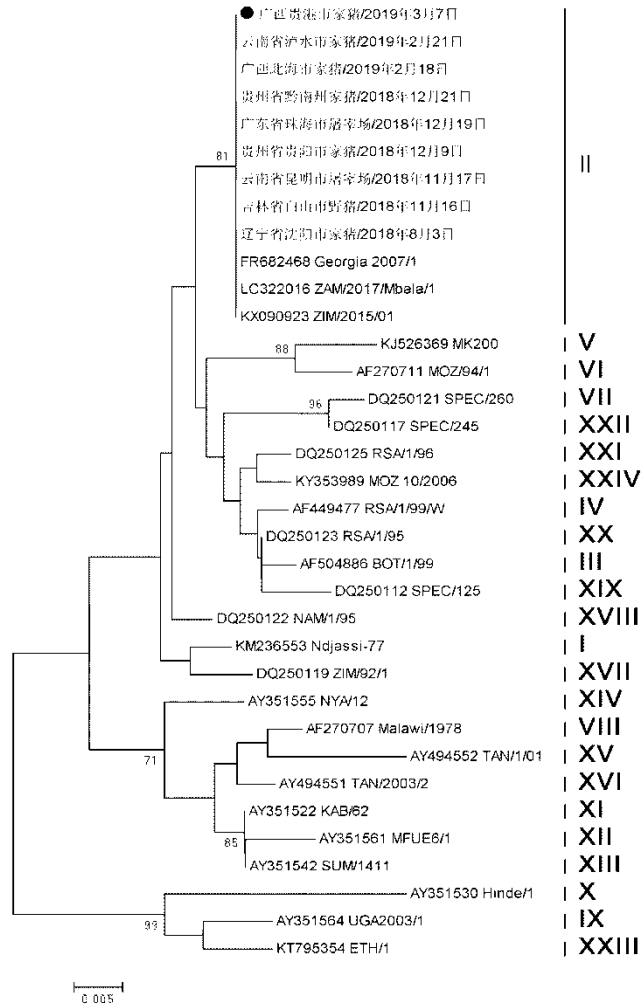


Herd distribution of ASF in different periods

## Transmission routes of ASF in different periods

	Movement of infected pigs and risk pig products	Swill feeding	Mechanical dissemination by contaminated vehicle and personnel
Phase I (—2018.9)	35.3 %	47 %	17.6 %
Phase II (—2019.8)	15.1 %	39.7 %	45.2 %
Phase III (—2020.4)	80 %	0	20 %

# 3 different strains



## IGR/TRS 序列比对分析

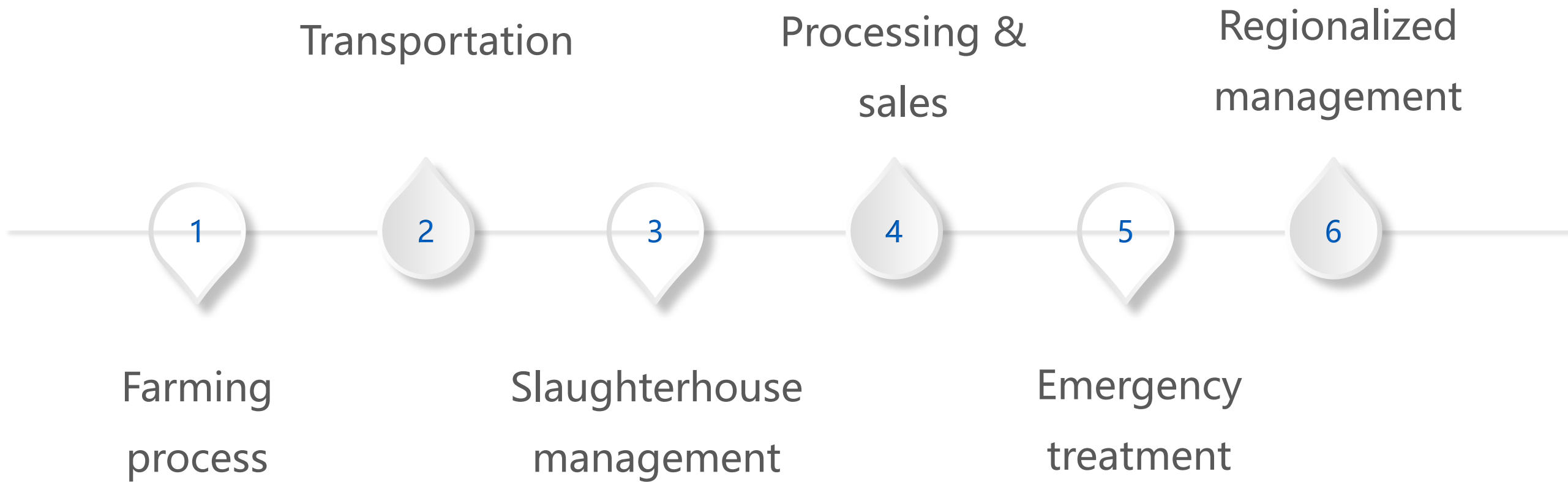
地点	毒株	IGR/TRS序列(I73R-I329L)	分型
中国	广西贵港市家猪 2019 年 3 月 7 日	GGAATATATAGGAATATATAGGAATATATAGAAATATATA	III
	辽宁省沈北家猪等 2018 年 8 月 3 日	GGAATATATAGGAATATATA-----GAAATATATA	II
	吉林省白山市野猪 2018 年 11 月 16 日	GGAATATATA-----GAAATATATA	I
格鲁吉亚	Georgia 2007/1	GGAATATATA-----GAAATATATA	I
	Irkutsk 2017	GGAATATATA-----GAAATATATA	I
	Rostov09	GGAATATATA-----GAAATATATA	I
俄罗斯	Lipetsk2016	GGAATATATAGGAATATATA-----GAAATATATA	II
	Voronezh 2016	GGAATATATAGGAATATATA-----GAAATATATA	II
	Estonia 2014	GGAATATATAGGAATATATA-----GAAATATATA	II
欧洲	Bel13/Grodno	GGAATATATAGGAATATATA-----GAAATATATA	II
	Ukr12/Zapo	GGAATATATAGGAATATATA-----GAAATATATA	II
	LT14/1490	GGAATATATAGGAATATATA-----GAAATATATA	II
非洲	Pol14/Sz	GGAATATATAGGAATATATA-----GAAATATATA	II
	ZAM/2017/Mbala/1	无序列信息	
	ZAM/13/Mbala	无序列信息	



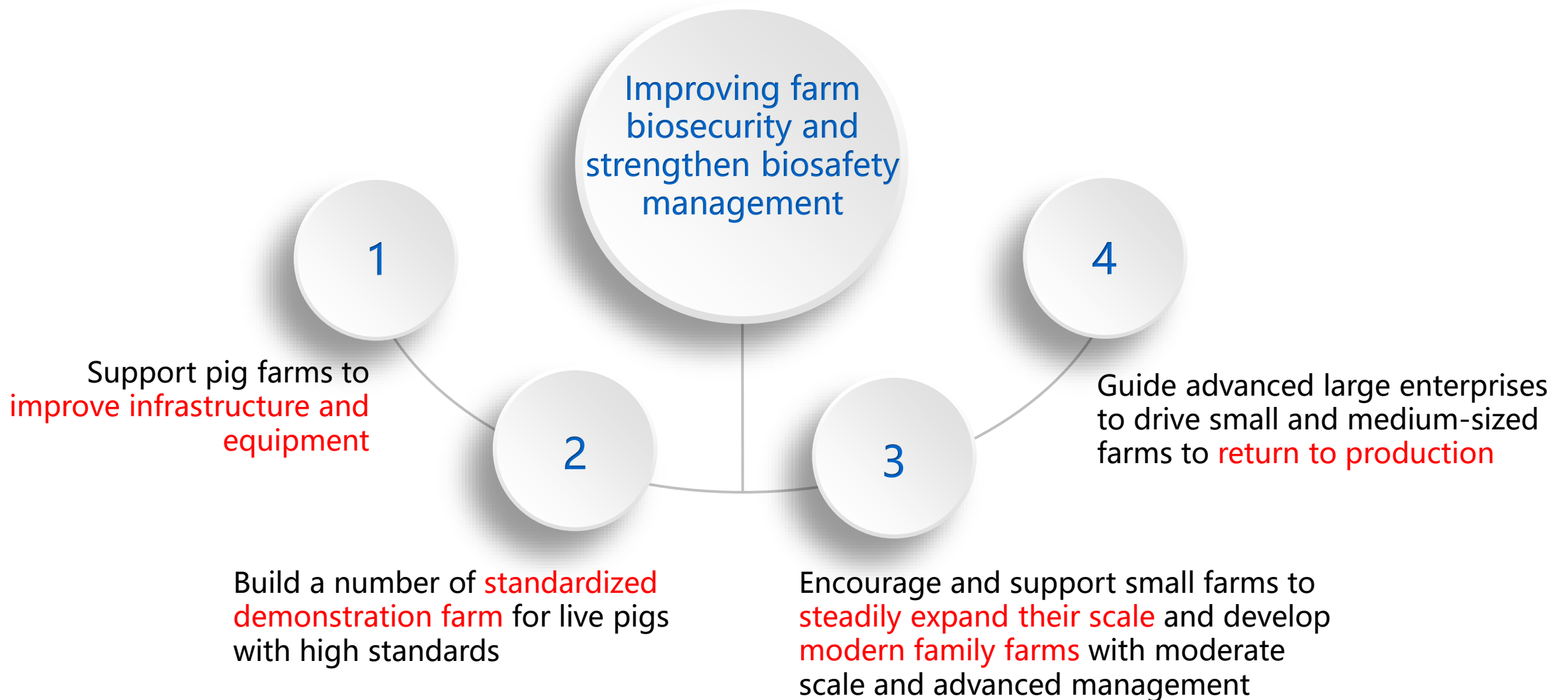
PART 02

# **Prevention and control approaches**





# Farming process



# Farming process



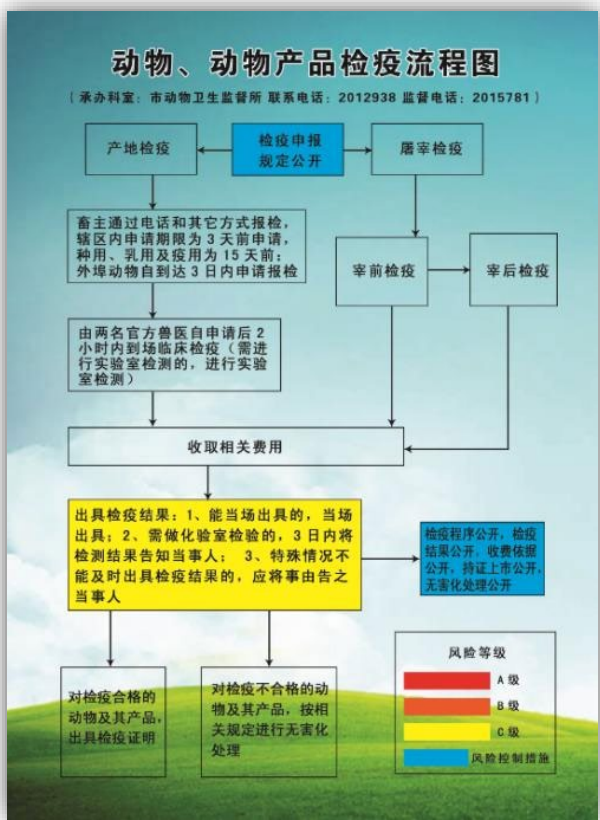
- Swill feeding is prohibited at national wide since Sep. 2018



- Clarify the lead department of kitchen waste management
- Establish and improve the whole chain supervision mechanism of kitchen waste

# Farming process

- Quarantine must be conducted before pigs to be sold



**动物检疫合格证明 (动物 A)**  
Nº 4400145501

货主	联系电话		
动物种类	数量及单位		
启运地点	省	市(州)	县(市、区) 乡(镇) 村(养殖场、交易市场)
到达地点	省	市(州)	县(市、区) 乡(镇) 村(养殖场、屠宰场、交易市场)
用途	承运人	联系电话	
运载方式	公路	水路	航空
运载工具	车牌号	运载工具	牌照号
运载工具消毒情况			
本批动物经检疫合格, 应于 日内到达有效。			
官方兽医签字: _____			
签发日期: _____ 年 月 日			
(动物卫生监督所检疫专用章)			
牲畜耳标号			
动物卫生监督所	盖章		
备注			

注: 1. 本证书一式四联, 第一联动物卫生监督所留存, 第二联随货同行。  
2. 跨省调运动物到达目的地后, 货主或承运人应在 24 小时内向输入地动物卫生监督所报告。  
3. 动物卫生监督所联系电话: \_\_\_\_\_

Animal A-certificate (inter-provinces)

**动物检疫合格证明 (动物 B)**  
Nº 4400719052

货主	联系电话		
动物种类	数量及单位	用途	
启运地点	市(州)	县(市、区)	乡(镇) 村(养殖场、交易市场)
到达地点	市(州)	县(市、区)	乡(镇) 村(养殖场、屠宰场、交易市场)
牲畜耳标号			
本批动物经检疫合格, 应于当日到达有效。			
官方兽医签字: _____			
签发日期: _____ 年 月 日			
(动物卫生监督所检疫专用章)			

注: 1. 本证书一式四联, 第一联动物卫生监督所留存, 第二联随货同行。  
2. 本证书限省内使用。

Animal B-certificate (within province)

- Quarantine Certificate



# Transportation process

- Requirement for the transport vehicles
  - Proper condition during the transportation (e.g. anti-leakage, adequate space, enough drinking water)
  - GPS in the vehicle for cross-province movement tracing



# Transportation process

- Vehicles should be registered in local veterinary authorities
- Strictly cleaned and disinfected before and after transporting pigs



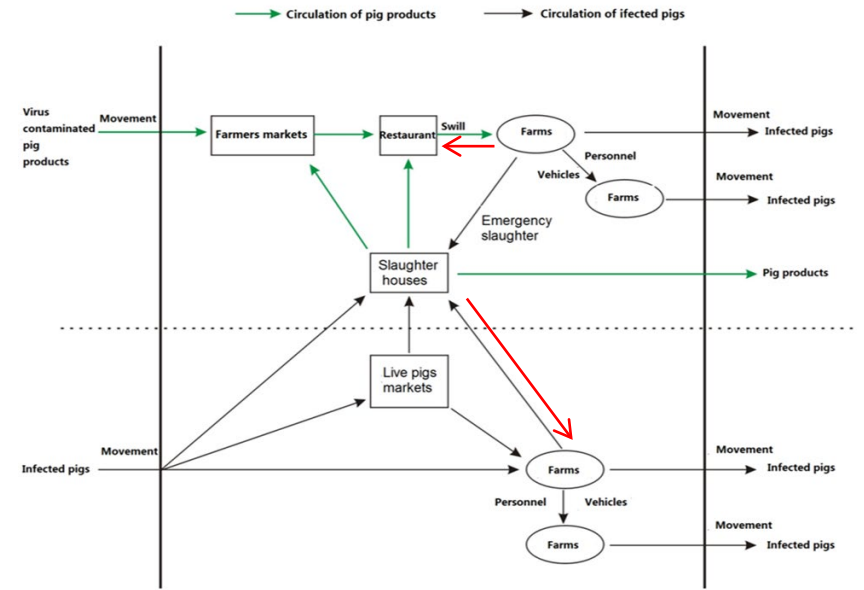
# Transportation process



- Take the designated route in the process of transporting live pigs
- Quarantine certificate + ASF testing report
- Direct trade and transport between farms and slaughterhouse (farm to farm)

# Slaughterhouse management

- Strictly entry-inspection
- ASF test in every batch of live pigs arrived
- Enough official veterinarians available at slaughterhouses
- Issue animal health certificates for products based on lab test





# Processing & sales



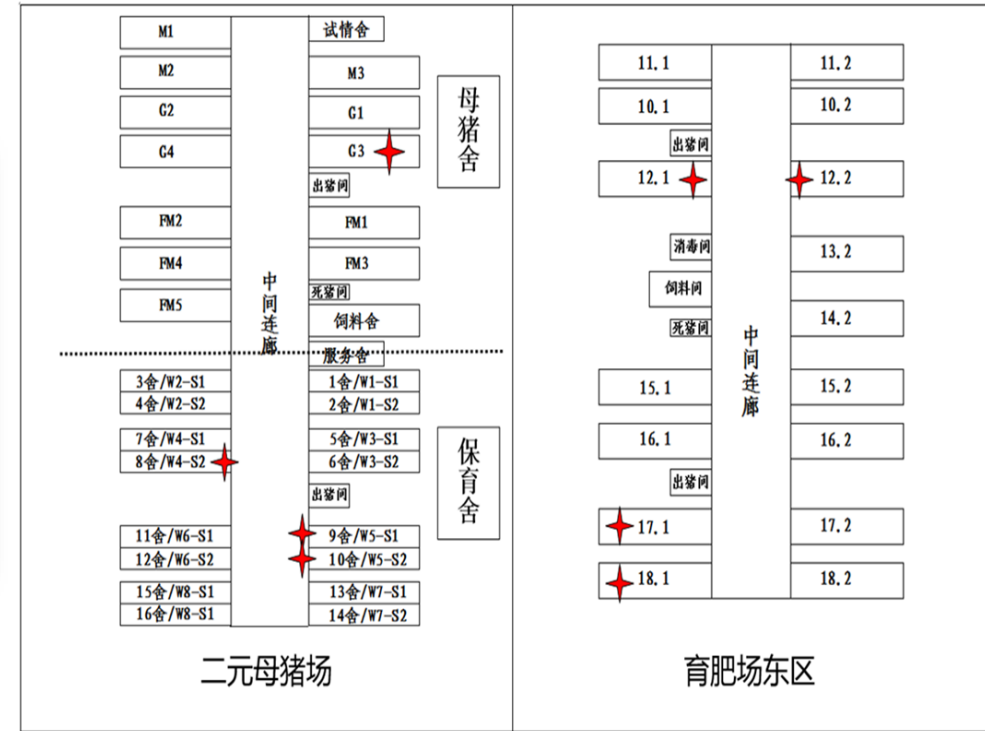
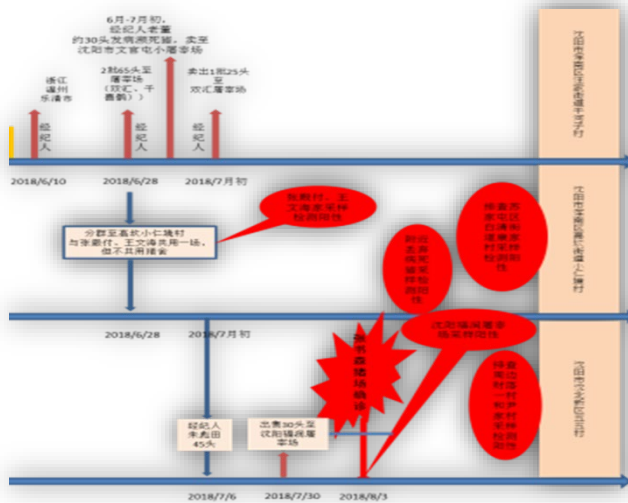
- Processed pork must have quarantine certificate, quality inspection certificate and ASF lab testing results
- Pork products processing enterprises carry out ASFV detection
- Random inspection of pork and its products on the market

# Reinforcing screening and surveillance

- National wide screening
  - Farms, markets, slaughterhouses, disposal factories
  - Using data of livestock insurance and disposal program
- Strengthen wild boar surveillance
  - especially full coverage surveillance in key areas, to prevent ASF spreading by wild boars.



# Outbreak investigation



For each ASF outbreak, MARA dispatched an epidemiological investigation team to carry out field investigation.

# Optimizing emergency treatment

2018

- Culling all pig herds in the Infected premises and infected areas

2019

- **Infected premises:** Culling all pig herds
- **Infected area:** Positive pig herds, culling measures as infected premises.  
Negative pig herds, continue to be raised or slaughtered nearby on designated routes.

2020

**Infected premises:** Culling all pig herds ( But the division of infected premises is more detailed)  
**Infected area:** During the blockade period, if the outbreak is found again in the infected area, the scope of the infected area may no longer be expanded.

# Regionalized management

我国非洲猪瘟分区防控示意图



01 Shorten the distance of movement for disease control

02 Balance the supply and demand of live pigs and their products

03 ASF-free compartmentalization

# THANK YOU FOR LISTENING

感谢您的聆听

