



YAN ZHICHUN

Consultant and Chief Science Officer, New Hope Liuhe Group, China

ASF Prevention, Control, and Compartmentalization in Private Sector in China: Observations and Experiences

Regional workshop on ASF compartmentalisation for Asia and the Pacific
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Outlines

- To practice compartmentalization is the only choice to survive from ASF pandemic.
- But we might like to reconsider the criteria to define ASF free compartment.
- Disposal of infected pigs is key to stop transmission

Practice in ASFV Precision Culling

It is proven being possible to quickly stop transmission and eliminate viruses from an ASFV infected herd by the NEW `test-removal` technique

- Widely available, state-of-art qPCR technology really creates another door to accurately detect ASF viruses in early phase of infection in a herd,
 - allowing removing test-positive and possible contact pigs as early as possible, to
 - Stop within herd transmission, and
 - Eliminate ASFV from the herd



Simple positive pressure air environment
Separated sample preparation rooms

- Compared to other antigen tests, qPCR IS the choice.
- Enormous number of samples.
- Contamination in Labs become common



It is proven being possible to quickly stop transmission and eliminate viruses from an ASFV infected herd by the NEW `test-removal` technique

- Not long after ASF outbreaks were reported, we took almost all surfaces in the barns where infected pigs were detected, and found viruses were obviously restricted around those pens that positive animals were found. Most other pen remained virus free.
- It is evident that ASF viruses transmits very slow in a herd after the introduction and exposure to pigs.
- All these leave enough time to stop within herd transmission.

It is proven being possible to quickly stop transmission and eliminate viruses from an ASFV infected herd by the NEW `test-removal` technique

- Implications:
- It is absolutely necessary to and possible to set ASFV free compartments within during the pandemic.
- Given the lethal nature of ASFV strain, developing and maintaining ASF free compartment is the only way to survive in the business.
- Successes in NEW `test-removal` to eliminate ASFV from early infected herds could call for some revision in defining, maintaining, and restoring a compartment.

**It is proven being possible
to quickly stop transmission and eliminate viruses from
an ASFV infected herd by the NEW `test-removal`
technique**

- Implications:
- During pandemic phase of ASF outbreak in a high pig dense regions, re-infection might be inevitable. BUT we can very quickly eliminate

Participation in `China Nations ASF-free Zone` programs

Participation in `China Nations ASF-free Zone`

- The program is not a traditional Zoning program but a similar the concept to compartmentalization.
- The `Zone` not only defines the physical territory but also the facilities, local regional veterinary services, biosecurity system, pathogen surveillances, etc.
- All criteria, including manure treatment, mortality disposal, feed mill, and slaughterhouses, have to be met.
- This ASF free Zone can be suspended once new infections detected, and also allows recovery of the free status when free status restored.

Participation in 'China Nations ASF-free Zone'

- Two of our large production systems participated in the ASF-free Zone program.
- Biosecurity programs (documentation, training, and records) are essential in sows farms, contract finishers, feed mills, and office area.

ASF-free Zone 1



21,000 PS sows + 3,000 GGP/GP sows with growers

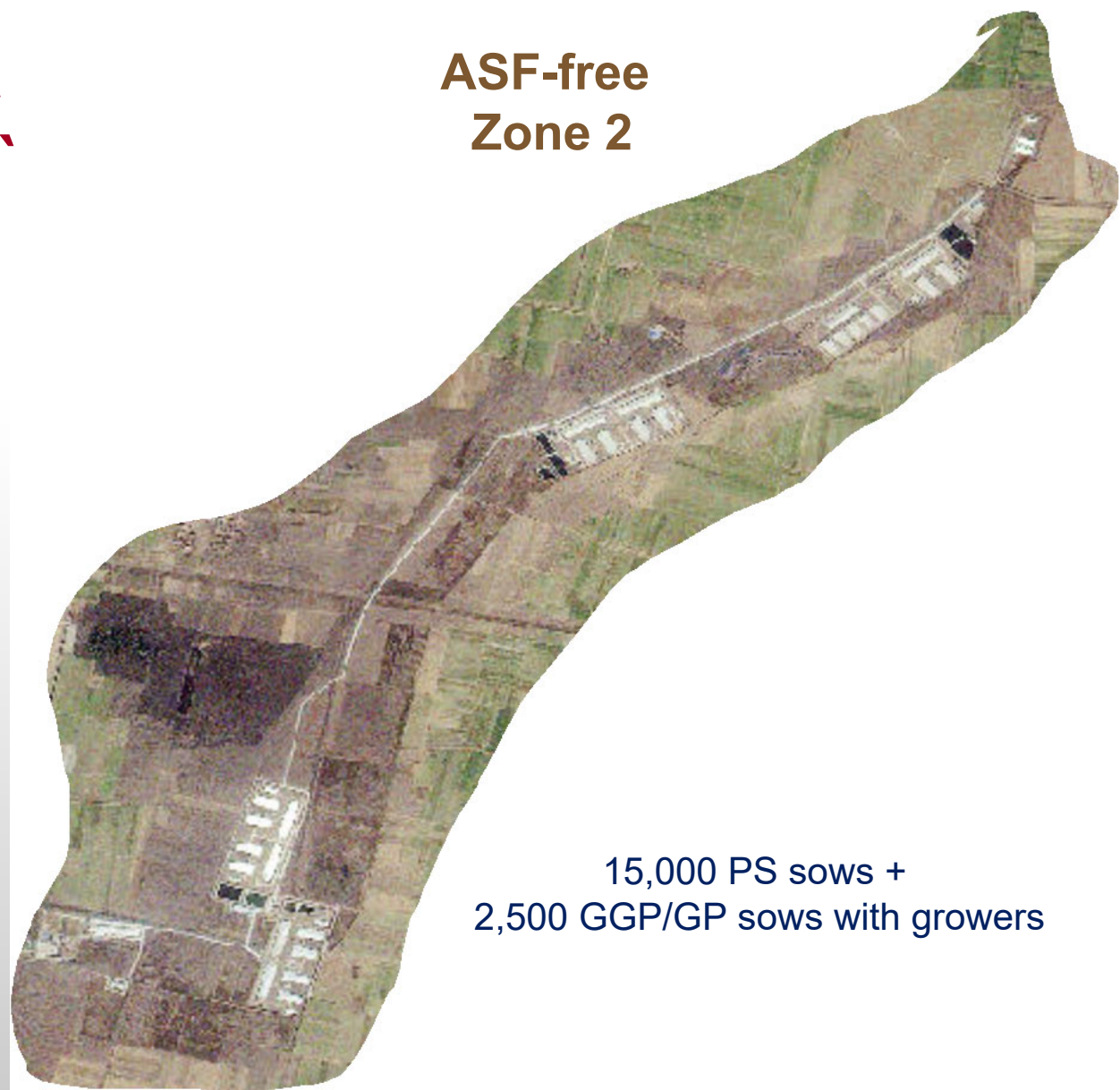


15,000 PS sows + 1,500 GGP/GP sows with growers

Participation in `China Nations ASF-free Zone` programs

- The ASF-free Zone program requires routine sampling and testing by both local authorities as well as in-house technicians.
- Actual daily surveillance tests are much more extensive!

ASF-free
Zone 2



15,000 PS sows +
2,500 GGP/GP sows with growers

Participation in `China Nations ASF-free Zone` programs

- Implications:
- China Nations ASF-free Zone` program intends to create model production systems during ASF pandemic.
- Recognition and Licensing process reflect strong government endorsement, providing strong incentives to the industry.
- The program can easily convert to formal compartmentalization system.

**..But still the major obstacle is
safe disposal of infected pigs**

What are the main sources of viruses?

- We now know ASF viruses travel very slowly, but why we still have many new infected herds?
- When pork were contaminated, ASFV can easily reaches to kitchens in many families then people could carry them to all places and products.
 - What about people packing your AI catheters, syringes, tools, ... ?
- However, it is really not practical to deep bury\heat treat\burning large amount of infected or possible-contacted pigs when we try to precisely remove them from a early infected herd.

What are the main sources of viruses?

- At the same time, we constantly educate our consumers that ASF pork is definitely safe to human.
- After all, Allowing those animals being moved to designated and strictly managed slaughterhouses for heat treatment and safe use should be seriously considered as option, even first choice when outbreaks become pandemic.
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Summary

- Compartmentalization is the only choice to survive from ASF pandemic. But we might like to reconsider the criteria to define ASF free compartment.
- Participation in `China Nations ASF-free Zone` programs is good start to adopt compartmentalization in the future for eradications.
- Disposal of infected pigs is key to stop transmission



YAN CHICHUN

Email: zhichunyan@vip.tom.com

Phone: +86 139011 20308



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

12, rue de Prony, 75017 Paris, France

www.oie.int

media@oie.int - oie@oie.int

