

**For discussion
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Advisory Council on Food and Environmental Hygiene

**Work in Response to
African Swine Fever Case in a Local Pig Farm**

PURPOSE

This paper briefs Members on the Government's work in response to the recent case of African Swine Fever (ASF) in a local pig farm in Hong Kong in February 2021.

BACKGROUND

2. Since the first ASF outbreak on the Mainland reported in August 2018, the Government has been closely monitoring the situation, heightening vigilance and implementing corresponding preventive measures to minimise the risk of ASF infection in live pigs in Hong Kong, as well as to ensure steady supply of live pigs for consumption by the public as far as possible. Measures were further strengthened in view of the two ASF cases found in Sheung Shui Slaughterhouse (SSSH) in May 2019. Members were briefed on the details of the diseases and preventive measures adopted by the Government in November 2018 and the Government's work in response to the outbreak in Hong Kong in September 2019 vide ACFEH Paper No. 7/2018 and No. 5/2019 respectively.

3. On 4 February 2021, 6 out of 30 pig samples collected at a local pig farm in Yuen Long¹ (Index Farm) tested positive for ASF virus. Under the Public Health (Animals and Birds) Regulations (Cap. 139A), the Director of Agriculture, Fisheries and Conservation (DAFC) declared the Index Farm as an infected place in order to prevent the virus from spreading

¹ The licensed maximum rearing capacity of the Index Farm is 4 000 pigs.

to other local pig farms. Taking into account the contingency plan and advice from international experts², all pigs totaling 3 979 in the Index Farm were culled. The operation of local slaughterhouses and the overall supply of live pigs in Hong Kong were not affected by this incident.

4. Besides total depopulation, other risk management measures to reduce potential ASF virus introduction and transmission, and alternative approaches to ASF outbreaks in local pig farms were also explored, including partial culling (e.g. culling pigs in the affected sheds only if appropriate isolation could be achieved with corresponding biosecurity measures implemented). In fact, partial culling is being used successfully on some pig farms in the Mainland, provided that early detection of ASF virus is achievable before transmission to multiple sheds has occurred. Partial culling was eventually not adopted because it was the first confirmed case found in a local farm and evidence showed that the virus had spread within the farm.

FOLLOW-UP ACTIONS AT FARM LEVEL

Index Farm

5. After completion of the culling operation on 16 February 2021, there is now no pig on site in the Index Farm. Next steps are to ensure proper decontamination. Plans have been drawn up for cleansing and disinfection (C&D) and restocking of pigs for the farm. The whole process may take approximately two to three months subject to completion of thorough C&D and satisfactory re-introduction of sentinel pigs before farm operation resumes.

6. With reference to the practice of the European Union, a minimum of 6-week emptying period, from the day of removal of all the potentially contaminated materials such as feeds, with two rounds of thorough C&D would be mandatory prior to restocking of the farm. Subject to satisfactory inspection by officers of the Agriculture, Fisheries and Conservation Department (AFCD) at the end of the emptying period, the

² Internationally recognized experts in the area of ASF in the Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (OIE) have been consulted.

farm would be allowed to re-introduce sentinel pigs up to 10% of the farm capacity. AFCD would closely monitor the health condition of the sentinel pigs for no less than 30 days after introduction and conduct regular and *ad hoc* inspections together with ASF testing as appropriate. If the testing for ASF virus of the sentinel pigs remains negative throughout the sentinel period, restocking of the farm could then commence.

Farms within 3km of the Index Farm

7. According to AFCD's contingency plan for detection of ASF in local pig farms, movement restrictions should be placed on other pig farms within 3 km of the Index Farm. In this incident, there are three other pig farms located within 3 km of the Index Farm. Accordingly, DAFC issued Orders to Detain Animal to these farms for temporary suspension of pig movement under Cap. 139A on 4 February 2021. Since then, AFCD officers have been conducting veterinary inspections and collecting samples from the pigs in these farms. No abnormalities (e.g. abnormal mortality or sickness in pigs) were found in the health of those pigs in the three farms.

8. With the satisfactory inspection and testing outcomes, the suspensions for the three farms were lifted on 10 February 2021. To ensure that only pigs in good health condition would be sent to the slaughterhouses, AFCD inspected the pigs before they were transported out of these farms and sent to the slaughterhouses on that day. The pigs would also be subject to the established ante-mortem and post-mortem inspection in the slaughterhouses as usual to ensure safety for human consumption.

Other farms

9. To ensure that ASF had not spread to other farms, AFCD traced the history of the local pig transportation vehicles from 25 January 2021 to 3 February 2021 and identified eight pig farms which had used the same pig transportation vehicles as the Index Farm on the same day for transporting pigs during that period. To rule out any potential transmission of the virus via these vehicles, AFCD officers visited these farms to understand the health conditions of the pigs. Samples were also

collected from pigs in these farms for ASF testing as necessary. The visits revealed no abnormalities (e.g. abnormal mortality or sickness in pigs) in these eight farms and all relevant samples collected showed negative results to ASF testing.

10. For all local pig farms except for the Index Farm, rounds of questionnaire surveys were conducted to collect animal health and biosecurity information as continued monitoring instead of on-farm inspections, in order to minimise disease transmission risk via personnel and vehicle movement to the pig farms. So far, all results revealed no abnormalities. AFCD has also called on all pig farmers to alert the Department immediately if abnormal health conditions are observed in pigs, and samples would be collected for testing where necessary. Overall speaking, the local pig farmers have been responsive and co-operative, and the test results were negative for all the samples submitted so far.

INVESTIGATION AND OTHER STEPPED-UP MEASURES

Investigation

11. AFCD is conducting an investigation with a view to tracing the source of ASF virus of the Index Farm in collaboration with international experts. Preliminary investigation results revealed that while several possible sources of ASF virus were suspected, the exact source of ASF virus could not be determined. Samples from the Index Farm, which tested positive for ASF, have also been sent to the World Organisation for Animal Health (OIE) ASF reference laboratory for further characterisation of the virus. Further improvement measures for enhancing the overall biosecurity of the Index Farm as well as other local pig farms will be recommended after the investigation, and some strengthening measures have already been put in place in response to the incident, which will be discussed in ensuing paragraphs.

Existing preventive measures

12. Over the past two years and so, relevant Government departments

have been implementing various preventive measures against ASF at all levels. At farm level, AFCD had banned the storage or use of swill of pork origin or in contact with pork or pork products as feed in local pig farm since 12 January 2019 and continued to implement various preventive measures, such as suspending the importation of breeders from countries or places with considerable risk of ASF; requesting pig farmers to adopt proper biosecurity measures; strictly controlling the vehicles and personnel entering pig farms; strengthening periphery of pig farms to prevent wild pigs from entering; recommending pig farmers to prohibit staff from bringing pork and pork products into the farms; enhancing the C&D of vehicles and personnel entering and leaving pig farms as well as carefully handling excrement.

13. At slaughterhouse level, a daily clearance arrangement whereby live pigs are slaughtered within 24 hours upon admittance has been imposed in SSSH and Tsuen Wan Slaughterhouse (TWSH) since June 2019. Under the arrangement, lairages in different areas of the slaughterhouses will be cleared out and undergo thorough C&D every day to enhance the biosecurity and minimise the risk of residual contamination. Given the short stay of pigs in the slaughterhouses, which underwent thorough cleansing and disinfection daily, the risk of ASF spreading in Hong Kong through the slaughterhouses was largely minimised.

Additional preventive measures being taken/explored

14. AFCD has enhanced the C&D effectiveness for local pig transportation vehicles by engaging contractor to provide C&D services with dedicated procedures in SSSH for such vehicles since October 2020. The C&D site for local pig transportation vehicles is separated from that for the Mainland counterparts and is appropriately sheltered to minimise the impact of weather and other environmental factors on the C&D effectiveness. Upon satisfactory inspection on the overall cleanliness of the vehicle, a certificate would be issued for the driver to present at the exit gate in order to leave SSSH. To reduce the risk of spreading virus to local farms through contaminated vehicles, AFCD and the Food and Environmental Hygiene Department (FEHD) will continue to stringently conduct C&D of local pig transportation vehicles and their counterparts for imported pigs from Mainland at the slaughterhouses. [AFCD is liaising

with the relevant parties to explore the feasibility of implementing similar C&D enhancement for local pig transportation vehicles in TWSH. *[Internal note: While AFCD has liaised with relevant parties recently, nothing further could be mentioned at this stage as they are still figuring out the feasibility.]*

15. To further minimise the transmission risk of ASF to local pig farms via pig transportation vehicles, a “one-trip-one-farm” arrangement to limit transportation of pigs from one farm directly to one slaughterhouse in each trip of a vehicle without visiting other pig farms is desirable. In addition, retrofitting the existing local pig transportation vehicles to have spillage-proof pig compartment could further prevent potential disease transmission, not only ASF. AFCD is actively liaising with stakeholders to facilitate the implementation of these measures as soon as possible which could benefit the entire pig farming industry.

16. In other parts of the world, infected wild pigs play an important role in the epidemiology of ASF. In view of the potential transmission of ASF to domestic pigs by wild pigs, AFCD has been collaborating with FEHD on an ASF surveillance programme for dead wild pigs since 1 November 2019. As of end February 2021, samples from 36 wild pig carcasses were collected and tested for ASF with negative results. While there is so far no evidence to demonstrate ASF infection in wild pigs in Hong Kong, AFCD will continue to remind all local pig farmers to put in place stringent biosecurity measures to curb on contacts between wild pigs and domestic pigs.

17. To further raise farmers’ awareness on ASF, AFCD had produced various communication materials disseminating information on ASF in the past two years including posters, leaflets, videos and guidelines to alert local pig farmers on the significance of ASF and the biosecurity measures that pig farms should heed. AFCD will continue to raise local pig farmers' knowledge on ASF prevention and control through various channels, including organising meetings and seminars.

CONCLUSION

18. OIE states that “during outbreaks and in affected countries, control of ASF can be difficult and must be adapted to the specific epidemiological situation”. Apart from the Mainland, ASF is now endemic in a number of Asian countries³ and its threat is expected to linger in the foreseeable future.

19. ASF is an animal health issue, and does not raise public health nor food safety concerns. The ASF prevention and control measures in place have been all along designed to protect local pig farms from ASF intrusion. The Index Farm in this incident was managed by total depopulation in view of the fact that it was the first local farm with a confirmed case and the evidence that the virus has spread within the farm. Total depopulation and decontamination was deemed the most appropriate course of action in this case.

20. In light of expert advice and the valuable experiences on ASF outbreak management in the Mainland and other countries, we will continue to constantly review our prevention, control and surveillance work to ensure the rationality of the measures and to minimise the impact on public and relevant stakeholders, as well as to sustain the supply of live pigs and the local pig farming industry facing the threat of ASF.

21. Members are invited to note the content of this paper.

**Food and Health Bureau
Agriculture, Fisheries and Conservation Department
Food and Environmental Hygiene Department
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³ Such Asian countries include Vietnam, Cambodia, Mongolia, Laos, Myanmar, the Philippines, Korea, Timor-Leste, Indonesia, Papua New Guinea and Malaysia etc..