

## **Urgent advice 14-2019 of the Scientific Committee established at the FASFC on an assessment of the risk and of risk mitigation measures of African Swine Fever introduction in Belgian pig holdings associated to crops and derived products that are produced in the ASF management zones I and II**

### **Terms of reference**

In the context of the African Swine Fever (ASF) epidemic affecting wildlife (wild boars) in the South of Belgium, the Scientific Committee is requested an urgent advice concerning the risk of ASF virus introduction in pig holdings associated to crops and derived products that are produced in the ASF management zone II (operational management zone of the outbreak wherein ASF infected wild boars have been retrieved) and zone I (management zone established around zone II and without detection of infected wild boars):

The following specific questions were posed:

- Question 1 - What kind of the treatments or types of valorization (silages, corn treatment, stocking delay for corns as within silo, other) for the main crops produced in zone I and II (grass, maize, corn, other) would allow virus inactivation and prevention of transfer to pig holdings?
- Question 2 - Can ground residue and other residues from potato processing which is spread on agricultural land be a risk of ASF virus transmission?

### **Methods**

This risk evaluation was performed in a qualitative manner and was performed urgently based on expert opinion. A systematic literature review, a quantitative evaluation and uncertainty analysis could not be conducted given the limited timeframe.

The Scientific Committee first specified the parameters of release and exposure to the ASF virus via crops, vegetal products and derived products, followed by the consequences of the occurrence of the hazard and hence the qualification of the risk. Finally, a number of measures to mitigate the risk are characterized.

### **Conclusions**

The two questions refer to measures to mitigate the risk of ASF introduction in pig holdings through crops, plant production, as well as their valorizations which are produced in regulated zones for ASF.

Considering:

- no distinction should be made between zones I and II because there is always a possibility of spreading of the infection from zone II to zone I, which has already been noted twice;
- the probability of contamination of plant production in zones I and II is low (8% of infected wild boar carcasses were found outside forest areas);
- the need to raise the level of biosecurity on pig holdings to reduce the risk of ASF virus infection;
- the seriousness of the consequences if infection of pig holdings arise due to a lack of biosecurity linked to the use of plant production from zones I and II;
- the current state of knowledge (with many uncertainties);

The Scientific Committee is of the opinion that the occurrence probability of introduction of ASF virus in pig holdings associated with crops, plant production and their valorizations from regulated zones for ASF is 'low'. However, because of the very serious sanitary and economical consequences of introduction of ASF in a pig holding, drastic prevention measures (risk reduction measures) are justified given the route of transmission of ASF virus considered in this opinion (through crops, vegetal products and derived products) and the potential high frequency at which sensitive pigs may be exposed.

Therefore, the Scientific Committee estimates the final qualitative risk for introduction of ASF in pig holding through feed, produced in the regulated zones I and II, to be 'high' based on the low probability of occurrence but very high gravity of the consequences.

During this risk evaluation, and specifically in ASF regulated zones, the type of pig holding must also be taken into account. The risk is namely much higher for:

- farms allowing outdoor access to grassland that may have been contaminated by infected wild boars;
- "organic farms" given the need for them to use local products and grass as food for their pigs according the production specifications.

With regard to risk mitigation measures for the transmission of ASF virus to pig holdings through the use of plant production from the regulated zones, the Scientific Committee proposes two levels of risk mitigation.

A severe regime aimed at maximum risk reduction based on:

- traceability of plant products from zones I and II;
- total prohibition of use of plant products from zones I and II in pig holdings (as feed, litter, etc.);
- permitted use of crop products from zones I and II for other animal sectors than suids;
- adoption of management measures necessary to avoid cross-contamination of pig feed with raw materials from zones I and II and processed for use in other animal sectors.

A moderate regime aimed at minimal risk reduction based on:

- use of plant products from zones I and II in pig holdings provided that they undergo a process allowing the inactivation of the ASF virus (essentially through thermal inactivation and provided that it can be guaranteed for the homogeneity of its temperature over the entire mass of the batch);

With regards to question 1 related to risk reducing treatments and types of valorizations of the main crops produced in ASF-regulated zones, the Scientific Committee considers that:

- in general, a thermal effect is more likely to reduce the risk compared to a long-term storage effect (because of too many uncertainties and too much variable weather conditions during the latter method);
- any post-harvest treatment that is likely to subject all products to a temperature of 70 °C (homogenously and evenly distributed) for a minimum of 30 minutes is sufficient for the inactivation of potentially present viral loads (estimated as weak).

In addition to answering the specific questions, the Scientific Committee also proposes additional options for risk management (see recommendations).

With regard to question 2, the Scientific Committee considers the risk of ASF-virus transmission through soil and other residues from the potatoe processing which are spread on agricultural land as negligible. The local production (zones I and II) of potatoes is small after all; it is much easier to detect contaminated tissues (cadavers of wild boars) on potato fields than on other types of crops which are taller; the number of wild boar carcasses found outside the forest environment is low and the probability that pigs may come into contact with these soils is extremely low.

### Recommendations

The Scientific Committee recommends:

- in the current state of propagation of the ASF epidemic in wildlife, to prohibit the use of crops produced in regulated zones for the purpose of feeding suids;
- to ensure the traceability of these crops, and to reserve them for the feeding of other animal species than suids;
- to avoid, at the level of operators and traders, any cross-contamination of batches prohibited for feeding pigs with other batches during their transport, storage and processing;
- at the level of pig farmers, to avoid any storage or mixture of feed intended for other animal species with that reserved for pigs.

The Scientific Committee recommends that, in an ASF-regulated zone and as far as possible, the fields be inspected for cadavers of wild boar prior to harvest.

The Scientific Committee recommends to thoroughly clean and disinfect all material that is used during harvest of crops in an ASF-regulated zone before its usage outside regulated zones. This in accordance with the recommendations formulated in rapid advice 09-2019 (Risk of introduction of African swine fever (ASF) in pig holdings associated with a resumption of forestry works in zone II (ASF-contaminated wildlife)) with regard to the cleaning and disinfection of vehicles to be used during forest activities.

The Scientific Committee recommends that, if this is feasible, crops in ASF-regulated zones undergo heat treatment of at least 70 °C for at least 30 minutes before being used as feed for animals.

The Scientific Committee recommends, in an ASF-regulated zone:

- to ban the use of freshly cut grass for the feeding of pigs;
- as in his previous opinions, to confine the pigs having outdoor access as much as possible inside;
- for those who nevertheless keep an outdoor access, to build effective fencing systems against wild boars (height, burial in the ground, double fence, sufficient space between the two fences and quality of materials used). These fences should be inspected daily and if necessary immediately repaired.

Given the absence of robust scientific data on the persistence of ASF-virus infectivity in plants and crops over time, under conditions of drying or under temperatures below 60-70 °C (biomethanisation), the Scientific Committee recommends to carry out as soon as possible the necessary studies to obtain them. The results of these studies will allow the risk manager to consider other options for valorization.

The full text is available on this website in dutch and in french.