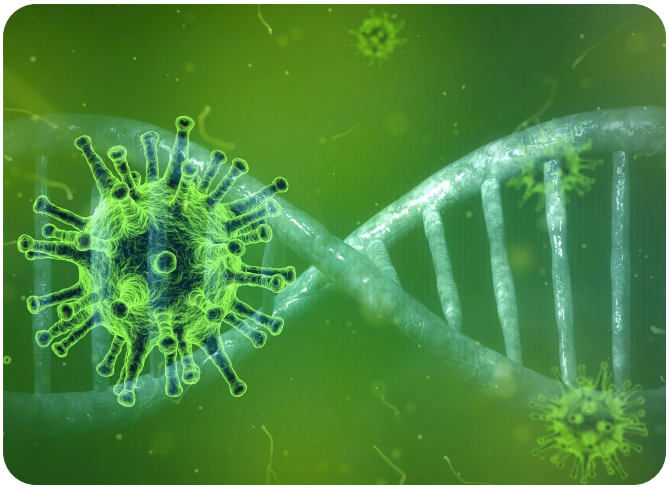
African swine fever

African swine fever (ASF) is a highly transmissible viral disease that affects both domestic and wild pigs and that has a mortality rate of up to 100%. The disease poses no threat to human health. However, as pig rearing can represent the main income for many farmers, especially family-run businesses, an outbreak can have devastating effects on both farm pig populations and the overall economy.

Detected for the first time on the African continent in 1921, African swine fever spread to other continents in the 1950s, finally reaching Europe in 1960s. The years 2022 to 2023 saw a major upsurge in cases of the disease worldwide, affecting EU regions but also countries that had never faced this problem before. Currently, the disease is continuing to spread worldwide, affecting both domestic and wild boars and leading to trade restrictions and disruptions on the global pork market.

ASF virus

African swine fever is a viral, non-zoonotic (i.e. not transmissible to humans), usually deadly, disease affecting pigs and wild boars, caused by a large and complex DNA virus of the *Asfarviridae* family. Wild boar are nature's super-spreaders, carrying the virus across large areas of countryside in many regions. The territory they cover and the fact that they are wild makes eradicating the disease very difficult. Transmission occurs through direct contact with infected animals (usually between domestic pigs and wild boars), contact with contaminated objects (boots, clothes, tyres, equipment, etc.) conveyed from an infected farm/area to uncontaminated ones, ingestion of infected meat/meat products, but also contaminated kitchen waste and feed, and bites by infectious ticks. The spread happens mainly through the movement of infected animals, contaminated pork products and the illegal disposal of carcasses. The virus is able to survive for long periods in the environment and in infected samples (many years at -70°C, 2 years at -20°C, 61 weeks at 4°C, 22 days at 37°C, 1 hour at 56°C and 15 minutes at 60°C). In addition, it has been shown that some arthropods can transmit the virus up to 5 years after being infected.



Symptoms

Clinical symptoms include fever, lethargy, loss of appetite, red skin, dysentery, and vomiting. Sometimes bleeding, cyanosis and skin necrosis are also observed. Sudden death without any other sign may occur and pregnant sows may abort. Only laboratory tests give the definitive diagnosis. While the majority of viruses can be neutralised by antibodies, this does not happen with the ASF virus, and the cross-protection between different strains of the virus is currently under evaluation.

Preventive measures

No vaccine is currently available, therefore preventive measures, strict biosecurity, prompt reaction and communication are crucial for the control of the disease. There is currently no cure. The European Commission has taken a series of measures to prevent the spread of the disease, while also adopting strict regulations and specific control measures. As all animals hosted on an affected farm must be destroyed, this leads to a significant economic loss for the countries concerned.

litter: *cucciolata*
offal: *interiora*
outbreak: *epidemia*
tick: *zecca*
upsurge: *impennata*

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1 Find the words which correspond to these definitions.

1. The number of deaths in a given area or period, or from a particular cause. .....
2. A time when something suddenly begins, especially a disease. .....
3. A sudden and usually large increase in something. .....
4. Able to spread from animals to humans. .....
5. The act or process of getting rid of something, especially by throwing it away. .....
6. A substance used to stimulate immunity to a particular infectious disease. .....
7. Measures that are taken to stop the spread or introduction of harmful organisms. .....
8. A parasitic bloodsucking invertebrate. .....

2 PAIR WORK Here is a list of some measures of biosecurity. Say which measures are efficient to prevent the spread of ASF virus.

1. ☐ Clean and disinfect all equipment and vehicles entering or leaving your farm.
2. ☐ Isolate sick pigs from the herd, and keep them away from visitors.
3. ☐ Make sure visitors wear clean clothes and shoes at all pig production facilities and farms.
4. ☐ Avoid contact with pigs purchased in affected areas.
5. ☐ Do not change clothing and footwear when leaving the farm.
6. ☐ Before purchasing feed, litter or pigs, ensure that they come from trustworthy farms.
7. ☐ Do not allow your pigs to have contact with wild boar or pigs from other farms.
8. ☐ Feed kitchen waste to pigs.
9. ☐ Practise outdoor farming in any areas.
10. ☐ Acquire pork or pork products from affected areas without any risks.
11. ☐ Wild boar hunters should not come into contact with domestic pigs after hunting.
12. ☐ Hunters and farmers should not leave offal from wild boar or domestic pigs in the fields and forests.
13. ☐ Leave food or waste in areas where wild boars are present.
14. ☐ Contact official veterinarian immediately if you suspect ASF has infected your herd.
15. ☐ If you suspect your herd has been infected from ASF, move your animals from the farm.
16. ☐ Contact official veterinary authorities when you find a dead wild boar.

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