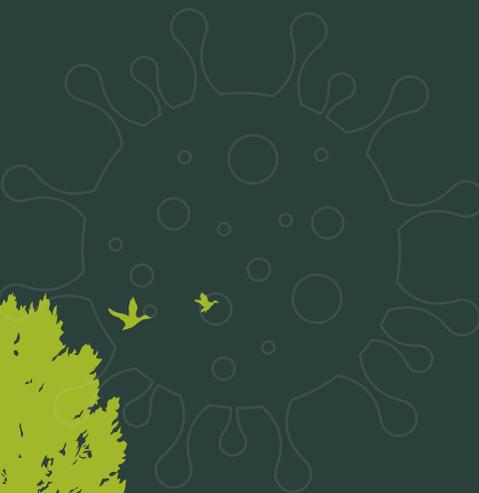
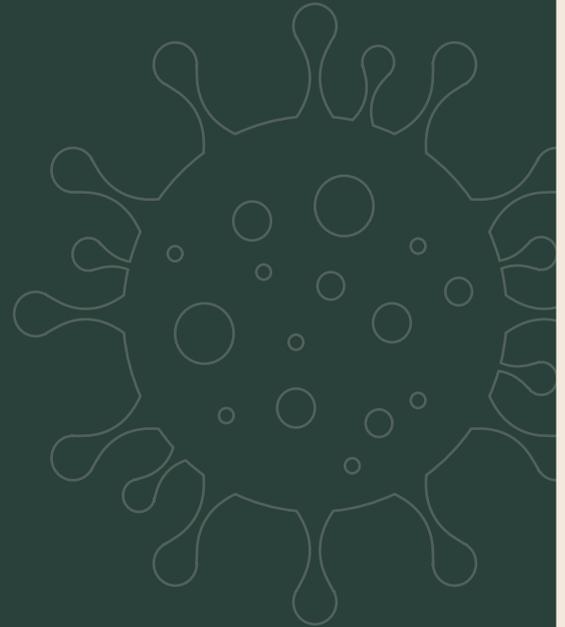
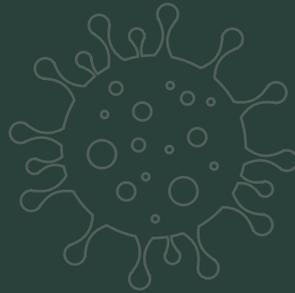
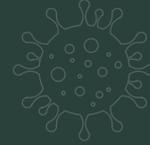


African Swine Fever Spotlight:

Exploring ASF



Livetec
systems

Building the future
of livestock protection

Contents

What is African Swine Fever?	3
The evolution of African Swine Fever	4
An emerging global threat for the world's pig farmers	5
Is African Swine Fever present in the UK?	6
What causes African Swine Fever?	7
Signs of African Swine Fever	8
Virus survivability	9
How does the virus spread?	10
What to do if African Swine Fever is suspected in the UK	11
What has been proposed to protect the UK's pig herds from African Swine Fever?	12
How Livetec can help	13



What is African Swine Fever?

African Swine Fever (ASF), not to be confused with swine flu, is a highly infectious disease that impacts pigs and wild boar. It is a serious disease and can result in high rates of mortality.

While swine flu is a respiratory disease, African Swine Fever is a viral one which can quickly compromise the health of infected animals. Swine fever exists in both mild and severe strains, with the severe strain typically leading to death within 10 days¹. It can also cause sudden death in the worst cases.

In contrast, pigs and boar infected with the milder strain may exhibit no clinical signs of infection and may not become seriously ill.

Whilst it doesn't pose a threat to human health, there is currently no vaccine to protect livestock from African Swine Fever, meaning it can pose a significant threat to animal wellbeing and farm businesses.



¹ <https://www.efsa.europa.eu/en/topics/topic/african-swine-fever>

The evolution of African Swine Fever

The World Animal Health Information System² (WAHIS)'s first recorded cases of African Swine Fever were in Africa in 2005. However, swine fever has been present in sub-Saharan Africa and the Americas since the 1900s.



² <https://www.woah.org/en/disease/african-swine-fever/#ui-id-2>

An emerging global threat for the world's pig farmers

While it took several years for African Swine Fever to emerge beyond Africa in this second wave, it is now spreading quickly around the world. With no vaccine, it is an emerging and concerning threat for pig farmers globally.

The situation is changing rapidly, with new countries discovering their first cases, and countries with existing cases struggling to contain its spread.

As of November 2022, the Pirbright Institute reports the most recent cases in Europe to be right on Great Britain's doorstep, with Italy, Germany and now France impacted. In the UK, African Swine Fever is classified as a notifiable disease.

Since 2020, more than 200 million pigs³ have died in countries around the world as a direct result of African Swine Fever.



According to the World Organisation for Animal Health (WOAH), African Swine Fever has been reported as present in 45 countries, across five different continents since January 2020, in domestic pigs and wild boar.

³ <https://www.woah.org/app/uploads/2022/12/asf-report24.pdf>



Is African Swine Fever present in the UK?

African Swine Fever is not currently present in the UK. However, it still poses a substantial threat to our pig farmers. With no vaccine available, and the disease spreading within Europe, it is getting ever closer to British pig farms.

The British Meat Processors Association (BMPA)⁴ characterises the UK as being vulnerable to the incursion of disease due to insufficient border checks being carried out on food items brought into the UK. This means that an outbreak of African Swine Fever is possible and is of significant concern among pig farmers.



The government's decision to shelve all border checks on food until further notice, leaves them vulnerable to an outbreak of the virus. And although less transmissible than foot and mouth disease, the consequences would be equally devastating for the UK pig industry,"

The BMPA



⁴ <https://www.newfoodmagazine.com/news/166471/african-swine-fever-on-the-march-with-uk-vulnerable-according-to-bmpa/>

What causes African Swine Fever?

Relatively little is known about African Swine Fever, despite it being known about for a long time. According to Pirbright, African Swine Fever is caused by a large, complex DNA virus, which is the only member of the Asfarviridae family, genus Asfivirus.

The virus encodes between 150 to 167 open reading frames, a large number of which are not needed for virus replication, but "encode proteins that have important roles in host interactions including immune evasion."

Research from a number of scientific bodies is ongoing in Europe, to develop a vaccine, but no such treatment yet exists.

Pirbright's current research includes:

- **How African Swine Fever inhibits antiviral host responses**
- **Discovery into the proteins that inhibit host defences**
- **The virus' genomics and transcriptomics**
- **How the disease is spread**
- **Candidate vaccine strains**

Research concludes that whilst experimental vaccines have been available for some time, one of which has recently been licensed in Vietnam, there are still no vaccines widely available.



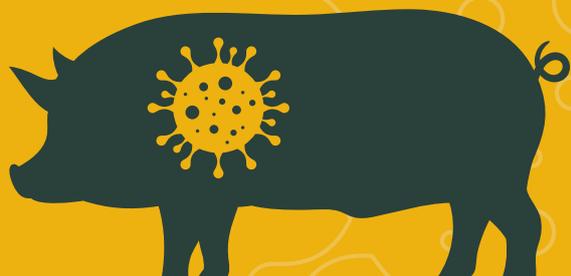
With no vaccines in place, it leaves the implementation of strict biosecurity measures as the most effective way to reduce the risk of introducing and spreading the disease.

Signs of African Swine Fever

Identifying African Swine Fever is not easy without laboratory confirmation, as many of its signs can also be symptomatic of other diseases or health issues and aren't exclusive to ASF. Signs of infection will usually appear within five days but may take up to 15 days.

When monitoring for African Swine Fever, clinical indicators to be aware of include:

- A high temperature or fever of 40°C or more
- Vomiting and diarrhoea
- Reddening of the skin, appearing in the ears, tail, feet, chest or under the belly
- Problems breathing
- Coughing
- Gummy eyes
- Stillbirths
- Weakness and lethargy including an inability to stand
- A loss of appetite
- Weight loss



Virus survivability

The African Swine Fever virus is capable of surviving a range of conditions⁵.

Scientific tests and conditions show that it is highly resistant to changes in temperature and continues to pose a danger even after being stored for a lengthy period of time between 0-4°C. At 37°C, it remains infectious for up to 22 days, and it can survive in 56°C temperature for one hour and 60°C for around 15 minutes.

If the virus is present in infected meat, it can survive a range of processes. Research has confirmed that curing meats actually ensures the survival of the virus for more than 12 months, while freezing and thawing a number of times isn't sufficient to kill the virus.

The virus is also stable at pH levels of 3.9 -13.4 for seven days.

It is also highly resistant to decay and dehydration.



⁵ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6749736/>

How does the virus spread?

The virus which causes African Swine Fever can be spread in a number of ways:

By proximity to other infected animals

Through contact with infected wild boars

By pigs ingesting infected pig meat

Illegal disposal of infected pig carcasses

Through the import of infected pork products such as sausages or ham

Through soft and hard ticks

Via contact with contaminated materials such as clothing, vehicles, or equipment

Of particular concern is the spread of the disease via wild boar in Europe. There are reports that suggest as many as 88% of cases in Europe in 2021 stemmed from wild boars, which stray into farmland and other urban areas.

Because the virus survives under many conditions, contact with infected materials and meats is also responsible for high levels of transmission.



What to do if African Swine Fever is suspected in the UK

African Swine Fever is a notifiable disease. That means it is a legal requirement to report any suspected or confirmed case.

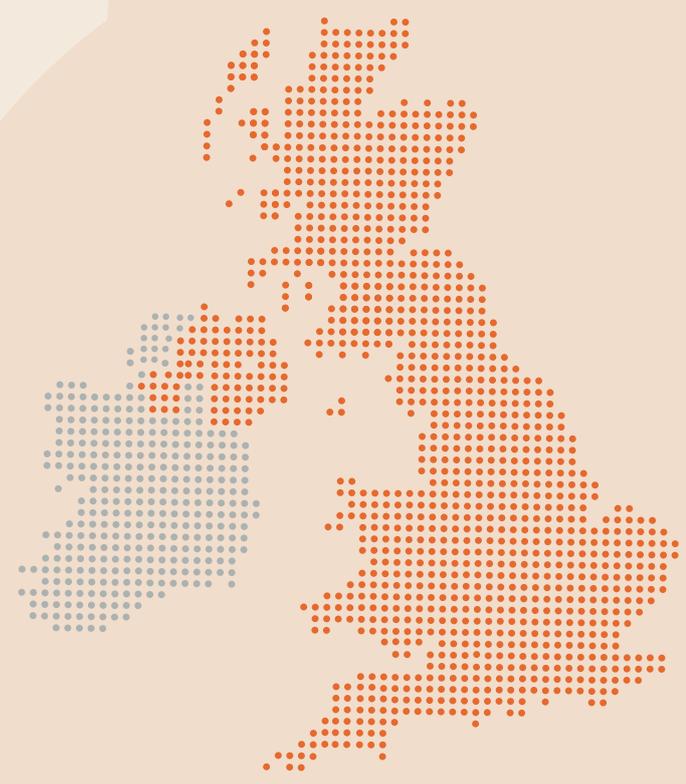


It is a criminal offence not to report a notifiable animal disease.

In England, call the Defra Rural Services Helpline on: 03000 200 301.

In Wales, call: 0300 303 8268.

In Scotland, contact the local Field Services Office⁶.



⁶ <https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/access-and-opening#scotland-field-service-offices>

What has been proposed to protect the UK's pig herds from African Swine Fever?

African Swine Fever has a high socio-economic impact and can have a profound effect on animal welfare because no vaccine is available. This, along with its high degree of transmissibility and high mortality rate, means effective measures to prevent the incursion of the disease in the UK is vital.

Many countries have been forced to implement stringent measures to halt the spread of African Swine Fever. Most commonly, measures such as culling, quarantine and import or export restrictions are used.

On 1 September 2022 the UK G controls⁷ on pork and pork products brought into the country from overseas. These controls prevent individuals from bringing pork products weighing over 2kgs into the country from the EU, unless they comply with commercial production standards. There's also a ban on pork and pork related products from non-EU countries. These measures don't apply to commercial imports.

The UK Government also says that the agricultural sector (i.e. farmers) must also practise high biosecurity standards, and other sectors, such as hospitality, should be mindful about how they dispose of food waste, ensuring that catering waste or meat products never enters the food chain for pigs.



If African Swine Fever ever reached the UK, it would have a severe and damaging impact on our pigs and pig industry. A single outbreak of this highly infectious disease would also harm relations with our trading partners and threaten the livelihoods of thousands of our pig farmers."

Richard Irvine
UK Deputy Chief
Veterinary Officer

⁷ <https://www.gov.uk/government/news/strict-new-controls-on-pork-and-pork-products-to-protect-britains-pig-sector-against-african-swine-fever>



Elevated standards of biosecurity provide defence against disease incursion.

This includes:

- Controlling movement of animals and people around farms.
- Imposing stringent cleansing and disinfection processes for people, animals, and equipment.
- Keeping animal housing in a good state of repair.
- Preventing contact with wild boar.
- Increasing animal health monitoring measures.
- Keeping clear, accurate and up to date records of animal and people movement both on and off farm.
- Quarantining animals suspected of being infected with African Swine Fever.
- Carrying out depopulation if the presence of disease is confirmed.





How Livetec can help

Livetec understands that the prospect of African Swine Fever appearing in the UK is of significant concern to our pig farmers. With no cure in sight and a lack of overall understanding about why it acts the way it does, strict biosecurity measures which provide a robust line of defence against disease incursion is essential.

This need is all the more pressing as African Swine Fever continues to spread across Europe close to our borders.

Shaped by more than a decade of biosecurity experience and expertise and working closely with the best research, evidence and scientific knowledge, Livetec offers a range of bespoke biosecurity solutions to support farmers through uncertainty and safeguard their livestock and livelihoods.





Biosecurity services and disease prevention

As a strategic partner of the Animal Plant Health Agency, the Department for Environment, Food and Rural Affairs, the British Poultry Council and the National Farmers Union, our comprehensive range of services are designed to help maximise biosecurity, protect livestock and minimise the risk of disease outbreak.

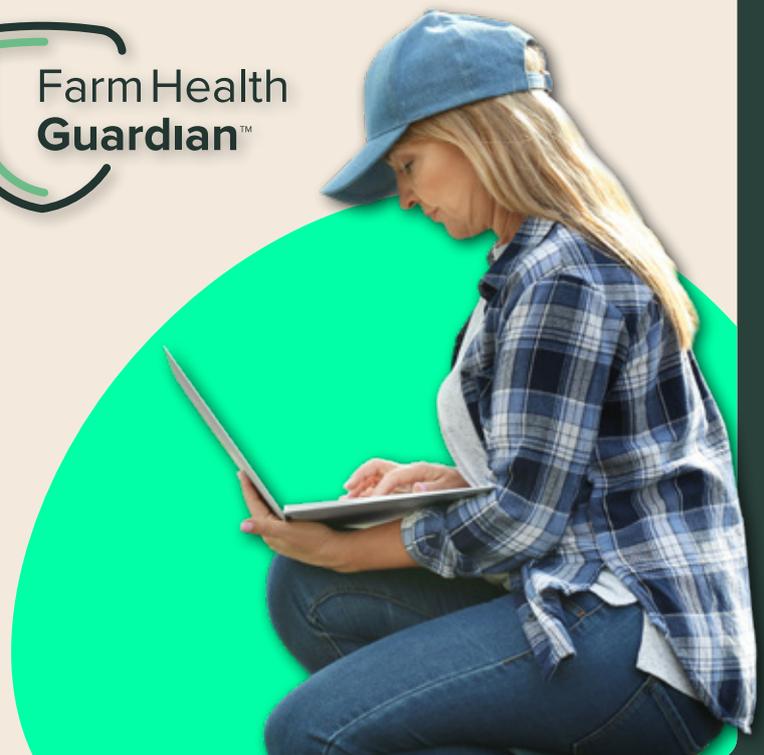
Our technical services team is here to help navigate the threat of disease with bespoke biosecurity strategies, mapping services, policy development and disease outbreak exercises. Our contingency plans are tailored to individual farm businesses and act as bespoke roadmaps should an outbreak occur.

We conduct risk assessments to help farms remain insurable and to minimise the impact of disease incursion.

Farm Health Guardian

In addition to futureproofing farms with appropriate biosecurity strategies and tailored response plans, Livetec's **Farm Health Guardian** biosecurity management software can elevate biosecurity processes, saving you time and money.

By recording movements on and off farm, digitising records and easier reporting, **Farm Health Guardian** helps better protect farms from the threat of disease and respond quickly to protect the wellbeing of livestock and livelihoods.



Livetec plans help protect your livelihood and livestock:



Biosecurity advisory service

Our biosecurity advisory service provides you with an on-farm visit with a biosecurity expert. Our full on-farm discovery sessions make us a supportive partner, helping you to minimise risks and know how you can better protect your farm from disease incursion.

Contingency plan

Our contingency plans encompass every aspect of farming businesses, predicting scenarios, risks and emergencies that could arise in the future and designing strategies that help to manage the impact of these concerns. Supported by a range of plans, this also helps make you compliant and insurable.



Biosecurity plan

Without a biosecurity plan in place, you are leaving your business and animals highly susceptible to disease incursion. Our biosecurity plans encompass and outline all of the measures that must be followed by every single person on and off farm to prevent the introduction of deadly pathogens.

Infected premises response plan

An infected premises response plan significantly enhances your preparedness. Designed to cover everything that APHA needs from you if and when they visit your farm business. This plan holds all of the critical information they need, in one place, allowing you to be less stressed and make your processes smoother.



National outbreak plan

Our national outbreak plan has been designed to comply with the regulations and requirements set by the UK government, providing bird owners with a wealth of information of everything you need to know should you be impacted by zones or a disease outbreak.

Cleaning and disinfection plan

A critical part of farming includes the ability to undertake thorough and comprehensive cleaning and disinfection of your premises. Our cleaning and disinfection plan is designed to give you the framework for all of the measures you need to take, with clear instructions that show compliance to APHA.



To find out more about how our plans can help your farming business, please visit www.livetecsystems.co.uk/plans or email us for more information info@livetecsystems.co.uk