



PIG PROGRESS

Oxford Sandy & Black Pig
Group, October 27, 2022

Vincent ter Beek, editor, *Pig Progress*

ASTF

Around the globe with

in 7 questions

DAIRY GLOBAL

PIG PROGRESS

ALL ABOUT FEED

POULTRY WORLD

FUTURE FARMING



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Introduction

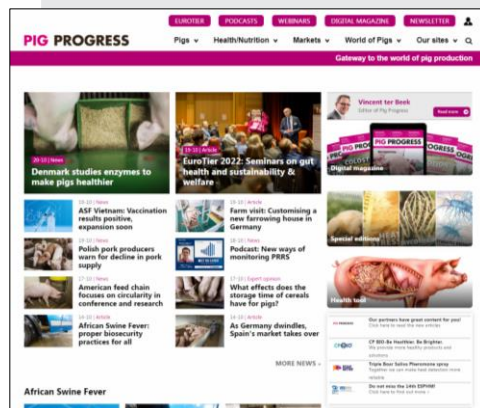
A few words about *Pig Progress*



Introduction

- 45 years old
- History & Journalism (Netherlands)
- Postgraduate Newspaper Journalism (UK)
- College teacher (2002-2003)
- Local journalism (2000-2005)
 - *De Twentsche Courant Tubantia*
 - *Provinciale Zeeuwse Courant*
- Trade journalism (2005-2022)
 - *Pig Progress*





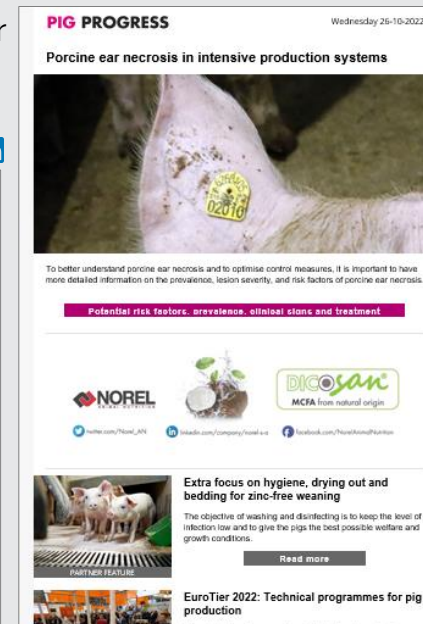
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Special editions

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Farm visits



PIG PROGRESS



Should there be fear of tropical pig diseases?

The outbreak of the tropical bluetongue disease in Western European cattle and sheep herds, rose the question if the outbreak could be related to global warming. For sure, the Netherlands have their plans listed, in case African Swine Fever would hit Northern Europe.

By Vincent ter Beek

Anyone in livestock industry held his breath when in August 2006, news of a bluetongue outbreak in the south of the Netherlands was made public. Quickly, the tropical sheep and cattle disease, transported by midges, was reported on farms in Belgium, Germany and France as well. Both the virus, being a tropical one, as the variety of the virus puzzled scientists – as this one had only been reported south of the Sahara and in the Caribbean – but not in Europe. “Quite frankly, for this specific Dutch vet, to realise that the disease he



Soft ticks can be long-term reservoirs for African Swine Fever. In ticks, the virus can be transmitted from generation to generation, waiting for a wild boar or pig to take a sand bath. (Photo: Institute for Animal Health, UK)

found in a sheep herd could be bluetongue instead of Foot-and-Mouth Disease – and had it sent for testing for bluetongue, was an extraordinary move. It takes some experience to think of bluetongue when you don't expect it.” Said Dr Piet van Rijn, project leader for exotic viral diseases at the Central Institute for Animal Disease Control (CIDC) part of Wageningen University Research Center, the Netherlands. Usually, this department is focusing on several different exotic diseases in the Netherlands, but in August 17th, 2006, all signals went red alert, and concentrated only on bluetongue. Eventually, Northern Europe reported 2,000 holdings infected and also the disease was reported as far off as Bulgaria by animals having antibodies specific for this type of bluetongue.

Propelled by Al Gore's film *An Inconvenient Truth*, several media have linked the emergence of bluetongue to global warming. For Van Rijn, this is too

hasty a conclusion, saying: “I am not a climatologist but the least one can say is that the very hot summer in Europe in 2006 was too a-typical to speak of a pattern in climate change.” However, what does worry Van Rijn about the bluetongue epidemic is that a tropical livestock disease can spread in Northern Europe. “It shows that apparently for that, the climate is good enough.”

Swine

The CIDC compiled a list of tropical diseases that, just like bluetongue, could hit the livestock industry unexpectedly and should be carefully surveilled, as they are highly contagious. Apart from bluetongue, African Horse Fever is listed, and, for pig producers extremely interesting, African Swine Fever. The last disease is in name and clinical symptoms similar to Classical Swine Fever (CSF), although casualties are usually more likely, but the diseases are not related in their origin (see Table 1). Main difference to CSF is the

way the ASF virus is transported: not only through pig-to-pig contact, but also through a vector, in this case soft ticks (*Ornithodoros moubata*), making the cause of the disease rather hybrid.

“Outbreak of ASF in northern Europe is in some way less likely than in bluetongue as it is not carried by flying insects but by non-flying ticks,” Van Rijn says. “However, there are other ways of infection. In 1985-86 in the Netherlands and Belgium there was an ASF outbreak due to contaminated swill.” It remains to be seen if the cold northern European climate would be suitable for ASF carrying ticks to survive, even if the climate is going to change as some infer. Soft ticks prefer a minimum temperature of 17°C during the night but shun daylight – this would suggest they could survive inside a European pig house rather than outside. Anyway, Van Rijn says, if an ASF outbreak would take place, it would not be ticks being its cause. “My main concern for western and northern Europe in this respect would be the Italian island of Sardinia, as that is the only place in Europe where ASF is virtually endemic. Many people on the island have backyard pigs – the insects quickly jump on wild boars. Exports, legal or not, to the rest of Italy could do the rest.” In recent years, an ASF outbreak was only reported in Portugal (1999), in which 44 animals had to be slaughtered; this outbreak did not have any major consequences. Van Rijn says he does not dare to think of what could happen if an outbreak could spread through Europe. “Theoretically, the disaster could be enormous. A doom scenario would be if the disease would enter an AI station, allowing it to spread to breeding farms very quickly. In that case it would spread very fast and have loads of consequences.”

Vaccination

In ‘peace time’, when no major livestock outbreaks hit the news, several other exotic diseases are studied at CIDC in Lelystad, for instance to gain more knowledge on ASF. Up until now, no vaccine has become available for the disease. On one hand this is due to the fact that the ASF virus is a virus with a huge DNA genome, meaning that research is rather complex. On the other, as the disease has not been existing in major pig production areas, the return of investment is too low for large companies to set up broad scale research. However, it is not difficult to imagine a climate change in this

www.PigProgress.net

Table 1. African Swine Fever vs Classical Swine Fever

| The name suggests a coherence between African Swine Fever and Classical Swine Fever, but the diseases are only connected through their names and clinical signs. | | |
|--|---|--|
| | African Swine Fever | Classical Swine Fever |
| Also known as | Warthog fever | Hog cholera |
| First recorded | 1921, Kenya | 1830, Ohio, US |
| Endemic in | Africa, south of the Sahara, mainly Mozambique but also Togo, Madagascar, Benin, Sardinia (Italy) | Asia, Central & South America, parts of Europe & Africa. USA, Australia and Canada are free of CSF, just like Ireland, Scandinavia and New Zealand |
| Clinical signs | Fever, skin lesions, convulsions, death in young animals, abortion – usually to a heavier extent than CSF | Fever, skin lesions, diarrhoea, convulsions, dyspnoea, death in young animals, abortion, mummies |
| Caused by | African Swine Fever Virus (ASFV) | Classical Swine Fever Virus (CSFV) |
| Type of virus | Large DNA virus, 150+ genomes | RNA virus |
| Transmission | Contact; infected meat; fomites; ticks (Ornithodoros) | Contact; infected meat; fomites |
| Cure/treatment | No effective treatment; slaughter is necessary | Vaccination is possible – not allowed in the EU however, there is no effective treatment |

tioned around the centre of the outbreak, infected or contact animals should be slaughtered, their premises cleansed and feral pigs surveilled.

In addition, the Netherlands' ministry of Agriculture, Nature and Fisheries drew up a minute emergency plan for an ASF outbreak. In it, detailed plans are put down for authorities and institutions on how to handle in case of suspicion of an outbreak or when an outbreak is reported – either in the Netherlands themselves or in any relevant foreign country. Van Rijn: “We made a similar plan for a bluetongue outbreak and last year it was shown that this kind of approach is definitely very helpful. We received a lot of praise for the way the Netherlands dealt with it. Even Germany made use of it.”

Vaccination

In ‘peace time’, when no major livestock outbreaks hit the news, several other exotic diseases are studied at CIDC in Lelystad, for instance to gain more knowledge on ASF. Up until now, no vaccine has become available for the disease. On one hand this is due to the fact that the ASF virus is a virus with a huge DNA genome, meaning that research is rather complex. On the other, as the disease has not been existing in major pig production areas, the return of investment is too low for large companies to set up broad scale research. However, it is not difficult to imagine a climate change in this

respect, because only one outbreak can change that picture. “One year before the FMD outbreak in 2001, some European governments were wondering whether we should carry on doing these kinds of research at all. One year later, after FMD, we knew we definitely should!” Bluetongue once more proved constant surveillance continues to be of major importance. Now ‘peace time’ is back again: for pig production it is hoped a treatment or vaccine for ASF can be developed before the disease finds the main European pig production areas. PP

In June, ASF hit the country of Georgia. For a full account, check the news section on page 6 and 7.

Global efficiency network

EPIZONE (Network of Excellence for Epizootic Disease Diagnosis and Control) is a new, EU guided, association to increase cooperation between the several member states in the field of animal health and diseases. On its website (www.epizone.eu.net) it says that the authority wants to improve research on preparedness, prevention, detection, and control of epizootic diseases within Europe to reduce the economic and social impact of future outbreaks. Altogether, it includes 20 institutes across 13 countries, including China, France, UK, Germany, the Netherlands, Turkey, Poland and Spain. Together they hope to help and create a synergy and to find out where gap management should focus on. Final aim is to facilitate knowledge transfer. For ASF, especially Spain and the UK are nuclei of knowledge, of which other member states could profit.

Pig Progress Volume 23, No. 5 2007 3

2 Pig Progress Volume 23, No. 5 2007

www.PigProgress.net

Pig Progress 23.05
(June 2007)



Dr Piet van Rijn: “My main concern for western and northern Europe for ASF would be Sardinia.”



Cover, September 2015



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My questions

1. Why is African Swine Fever so dangerous?
2. Will the problem of ASF be something of the past soon?
3. How quickly does ASF spread in wild boar?
4. Will ASF come to the UK?
5. What do the authorities have to do to keep ASF out?
6. Imagine, an infected wild boar gets found in the UK, then what?
7. What can you as pig farmers do to keep ASF out?



Question 1



Question 1...

Why is African Swine Fever so dangerous?

- ☐ Virtually 100% mortality.
- ☐ The virus is a super-spreader.
- ☐ There is no vaccine.



Question 1...

| | African Swine Fever | Classical Swine Fever (hog cholera) |
|-----------------------------|--|--|
| First recorded | 1921, Kenya | 1830, Ohio, USA |
| Endemic in | Sub-sahara Africa and Sardinia | Asia, Central & South America, parts of Europe & Africa |
| Clinical signs | Fever, skin lesions, convulsions, death in young animals, abortion, usually to a heavier extent than CSF | Fever, skin lesions, diarrhoea, convulsions, dyspnoea, death in young animals, abortion, mummies |
| Caused by | African Swine Fever virus (<i>Asfivirus</i>) | Classical Swine Fever virus (<i>Pestivirus</i>) |
| Type of virus | Large DNA virus, 150+ genomes | RNA virus |
| Transmission | Contact; infected meat; fomites; ticks (<i>Ornithodoros</i>) | Contact; infected meat; fomites |
| Cure & treatment | No effective treatment; culling is needed | Vaccination is possible – not allowed in EU; no effective treatment |



Question 1...



Source: Lina Mur, Universidad Complutense, Madrid

- Fever followed by **dullness**
- **Swelling** of the extremities
- **Enlarged** and **dark** **spleen**

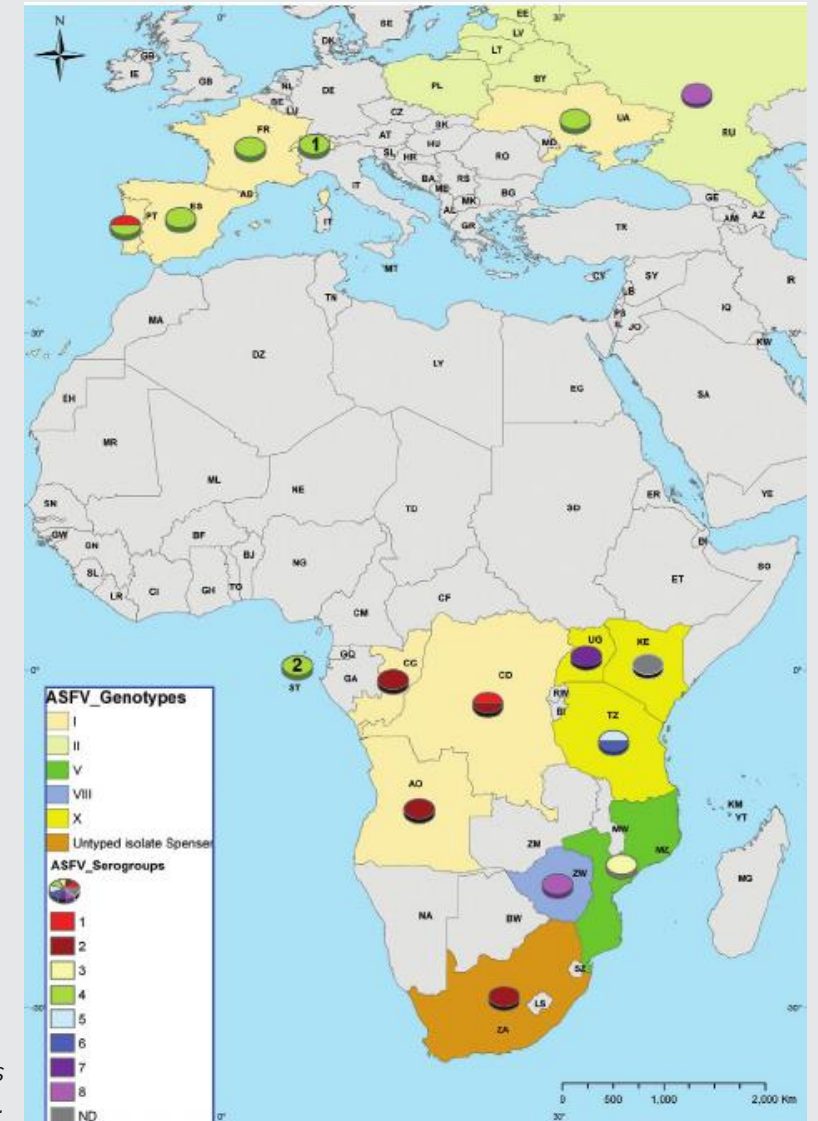


Source: Prof Iwona Markowska-Daniel, Warsaw University of Life Sciences, Poland

Question 1...

- At least six **genotypes**
- Endemic in **sub-Saharan Africa**
- **Genotype I** spread out over western Europe (and the Americas!) from 1957 until 1995
- Currently genotype I still endemic at **Sardinia**
- Currently **genotype II** all over the planet

Source: Magolovkin, A. et al, Comparative Analysis of African Swine Fever Virus Genotypes and Serogroups, Emerging Infectious Diseases, Feb 2015.





Question 1...



African hut tampan/ Eyeless tampan (*Ornithodoros moubata*)



Wild boar (*Sus scrofa*)



Question 1...

Why is African Swine Fever so dangerous?

- ☒ Virtually 100% mortality.
- ☐ The virus is a super-spreader.
- ☒ There is no vaccine.



Question 2

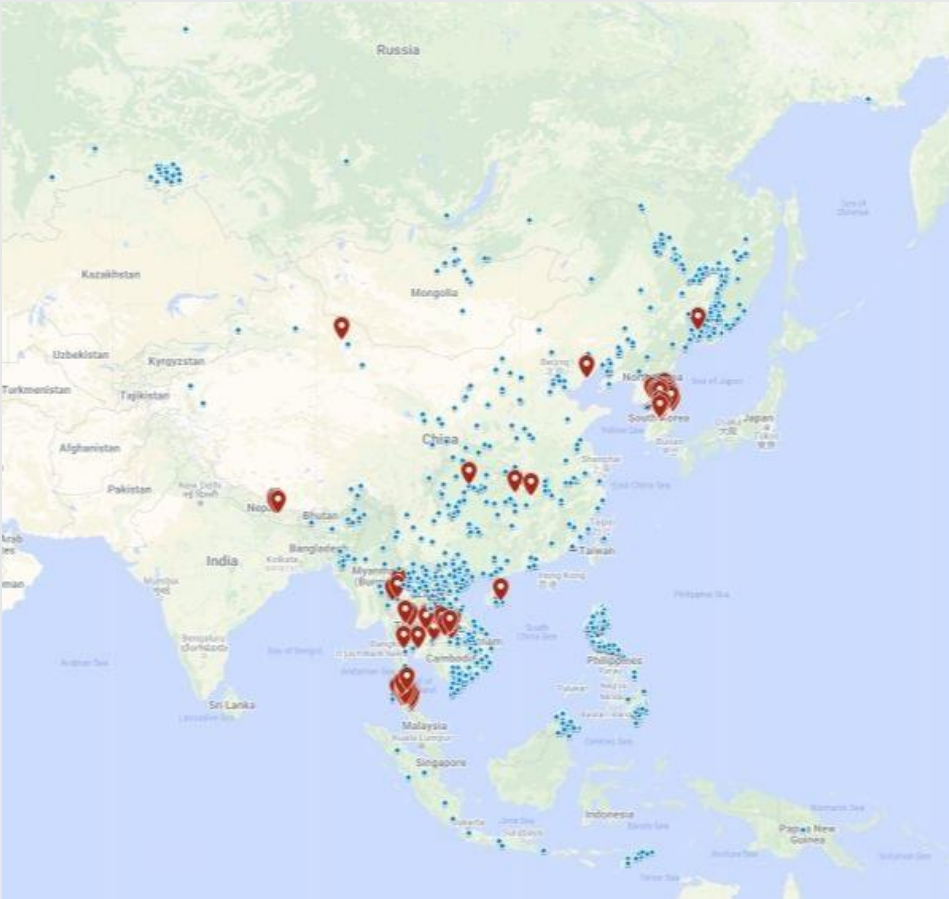


Question 2...

Will the problem of ASF be something of the past soon?

- ☐ Yes.
- ☐ No.
- ☐ Impossible to predict.

Question 2...



| | |
|-----------------------|-------------------|
| 2017 March | Asian Russia |
| 2018 August | China |
| 2018 December | Taiwan (islands)* |
| 2019 January | Mongolia |
| 2019 February | Vietnam |
| 2019 March | Cambodia |
| 2019 May | Hong Kong |
| 2019 May | North Korea |
| 2019 June | Laos |
| 2019 July | the Philippines |
| 2019 Augustus | Myanmar |
| 2019 September | Indonesia |
| 2019 September | East Timor |
| 2019 September | South Korea |
| 2020 March | Papua New Guinea |
| 2020 May | India |
| 2021 February | Malaysia |
| 2021 May | Bhutan |
| 2022 January | Thailand** |
| 2022 May | Nepal |

* Washed ashore;
no official report
to WOAHO/OIE

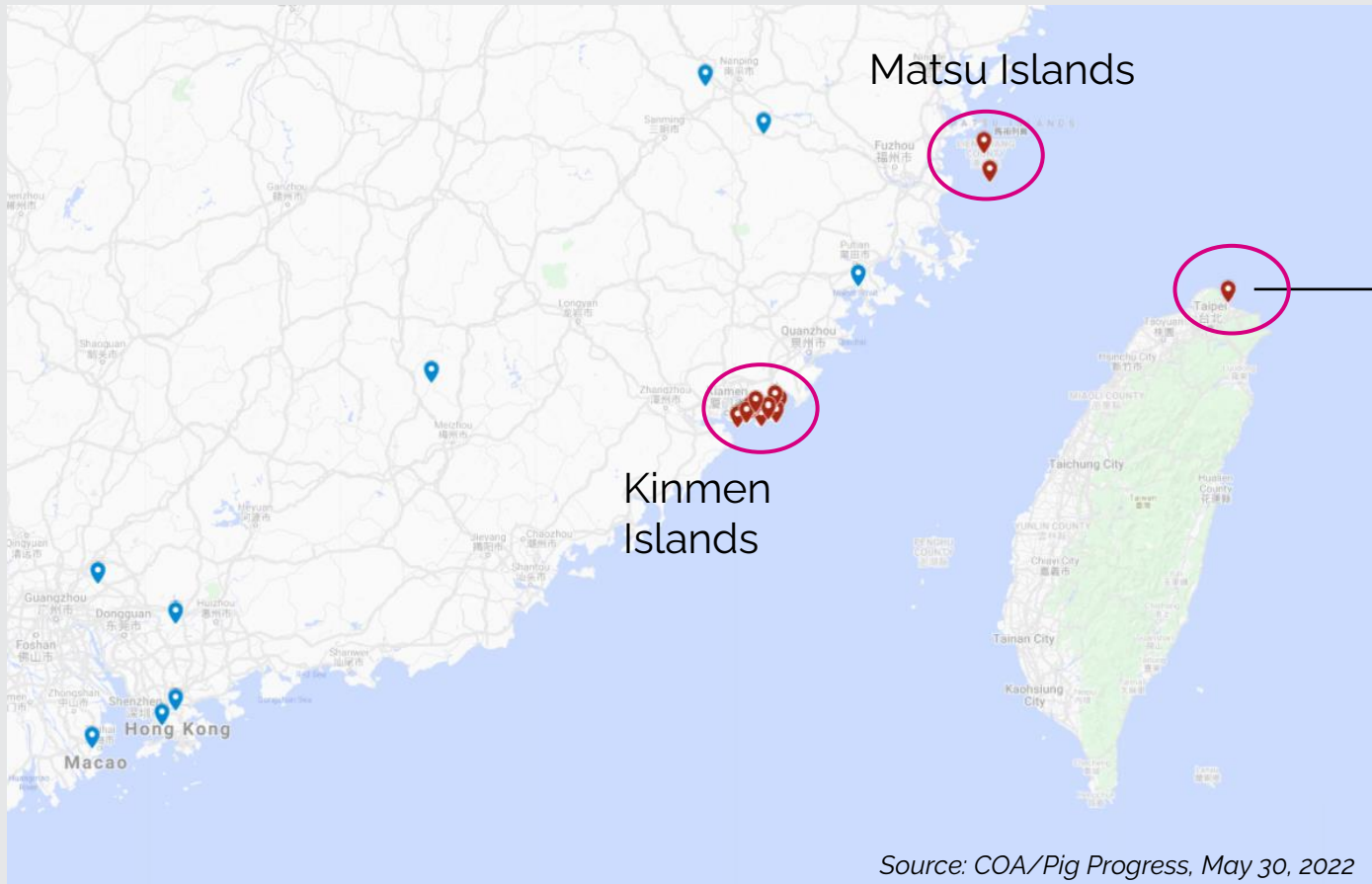
** Virus was
probably around
many months
before

Question 2...

- First outbreak in **2018**
- Outbreaks in **all provinces**
- Total herd (2017):
441.6 million (FAO)
- Total herd (2018):
428.2 million (FAO)
- Total herd (2019):
310.4 million (FAO)
- Total herd (2020):
406.5 million (FAO)
- **206** outbreaks officially reported (MARA/OIE)
- Severe **underreporting**
- Rapid **reconstruction**



Question 2...

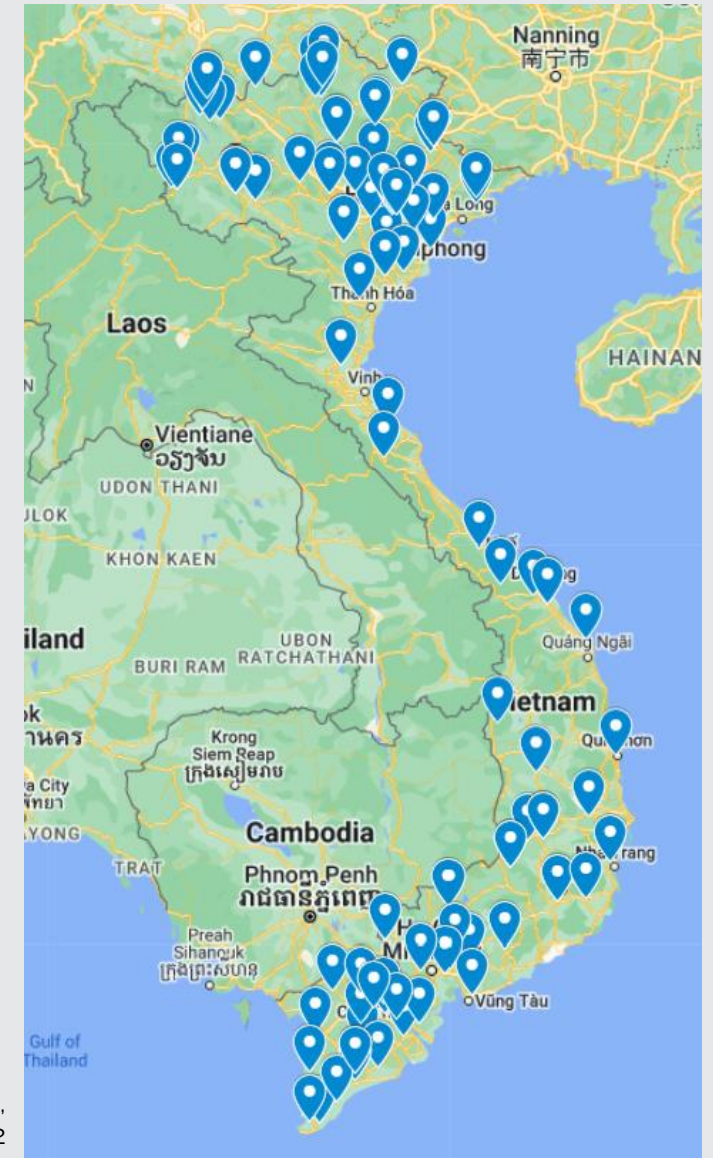


- **No ASF** on farms or in live pigs
- 16 pigs **washed ashore**, 2018-2022
- Found April 2021 – **how?**
- Proves severe **underreporting**

Question 2...

- First outbreaks in **2018**
- Vietnam only reports per province, so **63 dots**
- **47** provinces infected in 2022 (FAO)
- Total herd (2018): **28.2 million** (FAO)
- Total herd (2019): **19.6 million** (FAO)
- Total herd (2020): **22.0 million** (FAO)
- Total herd (2021): **28.0 million** (MARD)
- Outbreaks still occurring – **Sept/Oct** 2021, 280,000 pigs culled (GAINS).
- **Rebuilding** the pig industry fast
- First **vaccination** project (USDA)

Source: WOAHOIE,
Pig Progress, July 17, 2022



Question 2...

Spain: 1960-1995



- Endemic
- Virus came in waves
- Farmers got used to it
- Eradication cost 15 years, 1980-1995
- Much research to ASF

Question 2...

Research

- The Pirbright Institute, **UK**
- Kansas State University, **USA**
- Severo Ochoa Molecular Biology Center, **Spain**
- Plum Island Animal Disease Center, **USA**
- Vacdiva project, **EU**
- Harbin Veterinary Research Institute, **China**
- Navetco, **Vietnam**





Question 2...

Will the problem of ASF be something of the past soon?

- ☐ Yes.
- ☒ No.
- ☐ Impossible to predict.



Question 3

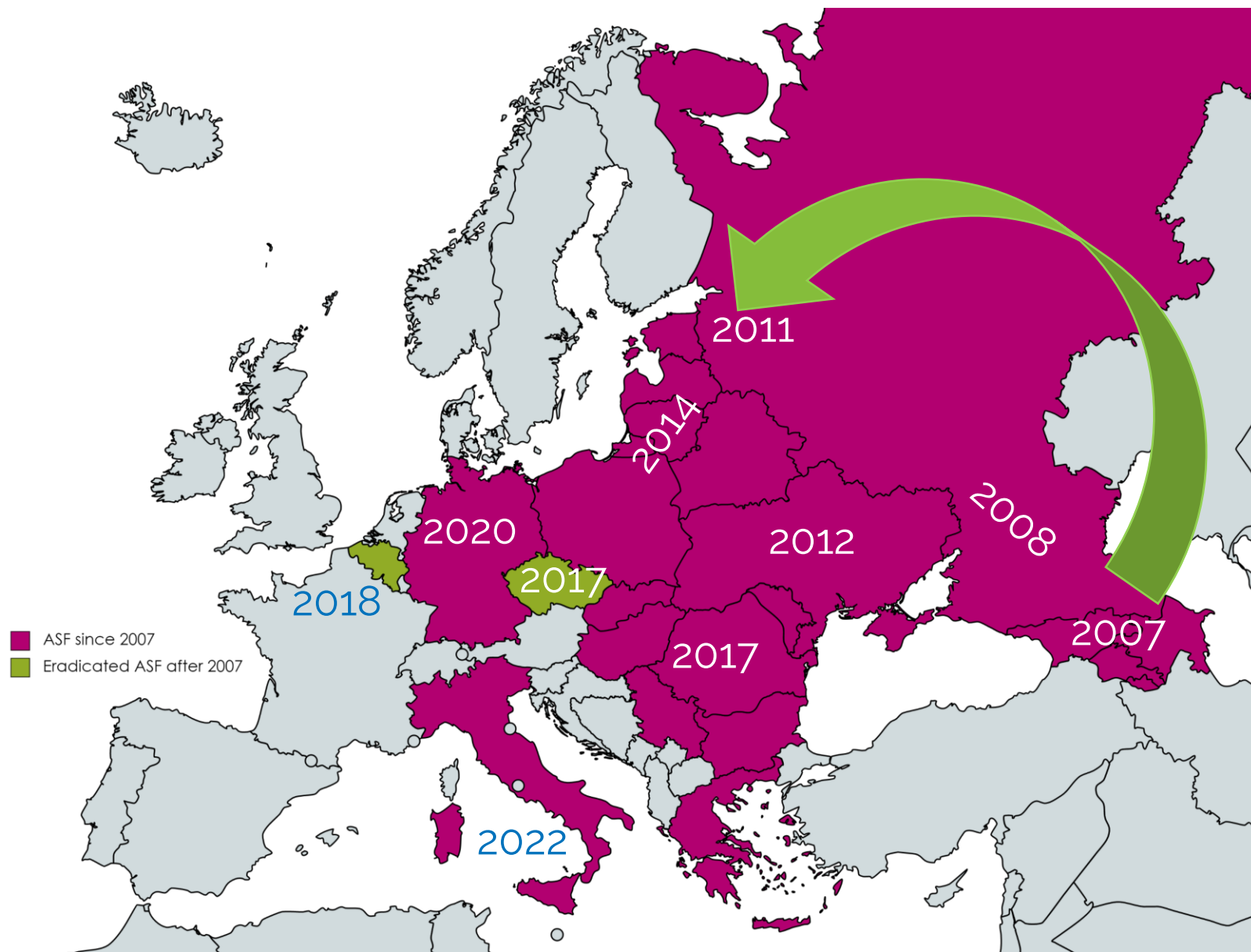


Question 3...

How quickly does ASF spread in wild boar?

- ☐ It spreads like wildfire.
- ☐ About 10 miles/month.
- ☐ Depends on human behaviour.

Question 3...



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Question 3...



"We overestimated the contagiousness of African Swine Fever. The disease moves very slowly. When looking at affected wild boar populations, most of them have not been significantly reduced. The virus doesn't spread that quickly at all."

Dr Klaus Depner & Dr Sandra Blome,
Friedrich-Loeffler-Institut, Insel Riems, Duitsland (2015)

Question 3...



"Wild boar shed the virus mainly when they are very sick and in the final stage of the disease. When the animals have high fever it's in their character to stay where they are, and they are certainly not going to walk very far when they feel bad."

Dr Klaus Depner & Dr Sandra Blome,
Friedrich-Loeffler-Institut, Insel Riems, Duitsland (2015)



Question 3...

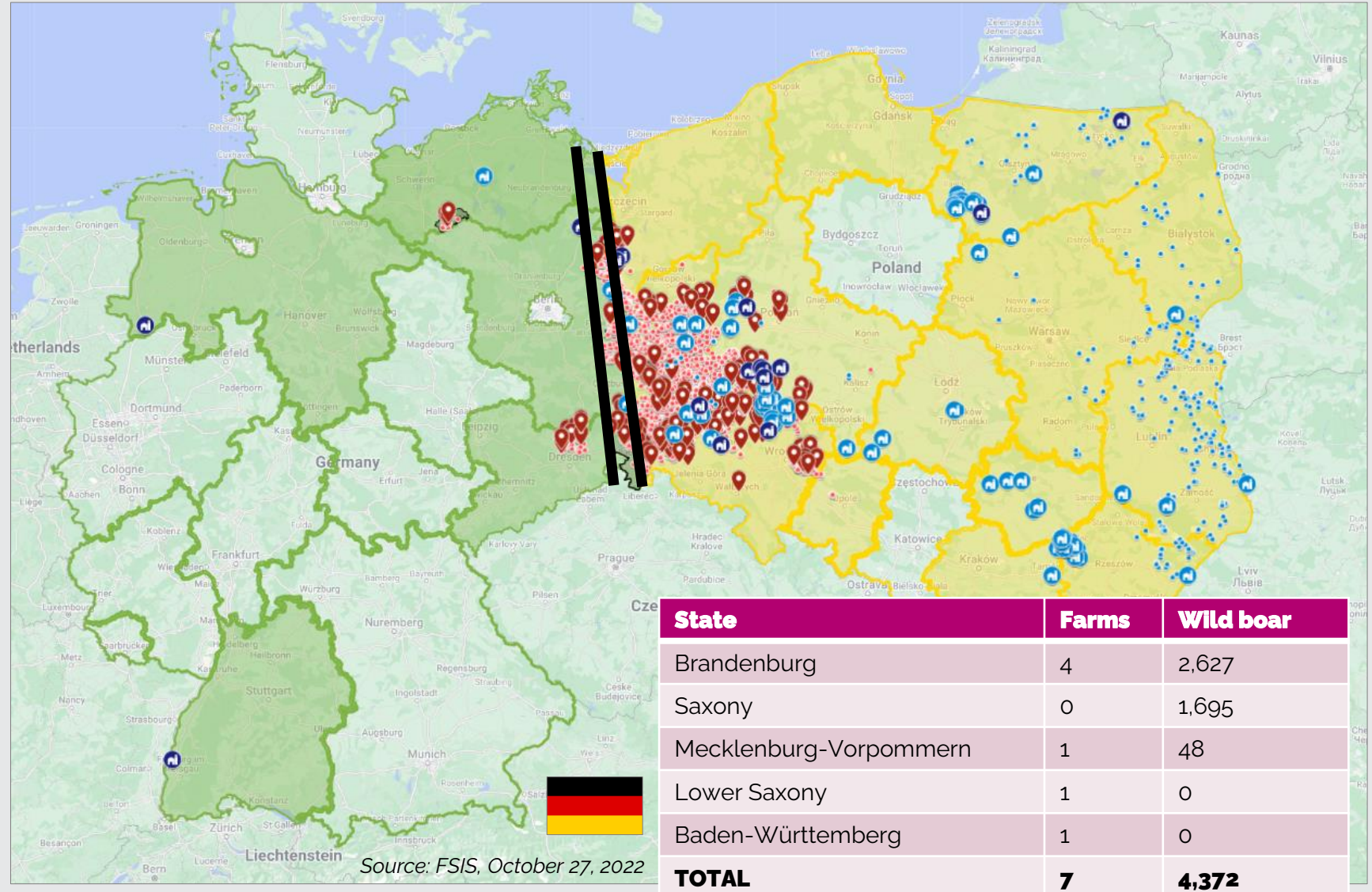
- Predicting and analysis with large amounts of data.
- Virus spreading at 124 miles/year (or 10 miles/month).
- That meant that ASF could reach Germany by 2022.
- Model did not include the role of human behaviour.
- Emphasised the role of migrating farm staff.

The screenshot shows the Pig Progress website interface. At the top, there's a navigation bar with 'Home', 'Feed', 'Poultry', 'Dairy', and 'Future' icons. Below this is a sub-navigation bar with 'Sows', 'Piglets', 'Finishers', 'Health' (highlighted), 'African Swine Fever', and 'World of Pigs'. The main content area displays a news article dated 'Jun 18, 2018' with the headline 'African Swine Fever can be in Germany in 4 years'. The article text states: 'According to a computerised model, African Swine Fever will reach wild boar populations in Germany in about 4 years. That – and more updates – became clear at the recent edition of the International Pig Veterinary Society (IPVS) Congress, held in Chongqing, China, 11-14 June.' It continues: 'The IPVS congress, which drew a whopping 5,500 veterinarians from predominantly China, touched on a range of different topics – and a series devoted attention to the growing problem of African Swine Fever (ASF) in Eastern and Middle Europe.' A section titled 'Early warning analysis' follows, mentioning 'the Polish researcher Andrzej Jarynowski of the Interdisciplinary Research Institute in Wroclaw, Poland, introduced an early warning analysis for ASF propagation in this area of Europe. On the basis of older outbreaks the team wanted to predict where and when outbreaks will take place in the future.' At the bottom of the article is a photo of a man speaking at a podium. The podium has logos for the '25TH INTERNATIONAL PIG VETERINARY SOCIETY CONGRESS' and '2018 International PRRS Symposium'. A banner in the background of the photo says 'Co-organised by Baring Bore Co'.

Question 3...

- **Eastern Poland:** 2014
- **Western Poland:** Nov 2019
- **Eastern Germany:** Sept 2020
- **Western Germany:** May 2022
- **Infected farms**
Germany:
 - 2 backyard farms
 - 2 outdoor farms
 - 3 commercial farms

Source: OIE/FSIS/FLI/MSGIV/GVI
Pig Progress, July 17, 2022





Question 3...

How quickly does ASF spread in wild boar?

- ☐ It spreads like wildfire.
- ☒ About 10 miles/month.
- ☒ Depends on human behaviour.



Question 4



Question 4...

Will ASF come to the UK?

- ☐ Most certainly.
- ☐ Absolutely not.
- ☐ There's a good chance.

Question 4...

Haiti & Dominican Republic



Question 4...

- Number of **producers** (pre-ASF): 25,000
- Industry **size** (pre-ASF): 1.8 million head
- Industry **value** (pre-ASF): US\$700 million
- **Backyard %** (pre-ASF): 35% of producers
- Date of ASF **entrance**: July 1, 2021
- Number of **provinces** infected: 29 out of 32
- Outbreak **locations** documented: ~1,000 (March 2022)
- **Cull numbers** due to ASF: 180,000 pigs (March 2022)
- **Reduction** of the pig herd: 25% (est.)
- **Compensation** paid: >US\$22 million (March 2022)
- **Inconsistent** infection pattern (USDA-ARS)

INTERVIEW ►►►

Dr Francisco Israel Brito and Professor Joaquín Paulino

“We are up against an invisible enemy”

Since mid-2021 African Swine Fever (ASF) virus has found its way into the western hemisphere, emerging in the Dominican Republic and Haiti. In the Dominican Republic, the virus is creating a headache – and a permanent solution will be difficult to achieve. Two Dominican pig health experts reflect on the situation: “Elimination is not that simple.”



THE FIRST OF JULY 2021 IS A DATE TO REMEMBER IN THE DOMINICAN REPUBLIC – THOUGH IT’S NOT FOR A PLEASANT REASON. That is when ASF was introduced in the country after an absence of more than 40 years. In a matter of months, the virus was reported in 29 of the 32 provinces of the Caribbean country. In addition, neighboring Haiti, with which it shares the island Hispaniola, also became infected. By March 2022 about 180,000 pigs had been culled in the Dominican Republic in an attempt to stop the spread of the virus – but as about 35% of the country’s pigs are kept in backyard farms, exact total losses are hard to estimate.

Veterinarian Dr Francisco Israel Brito, president of the Dominican Federation of Pig Producers, and Professor Joaquín Paulino, attached to the agricultural university ISA in Santiago de los Caballeros, are two of the agricultural leaders who have watched

the situation unfold in the country, which was also affected by ASF in the late 1970s. At the time, total depopulation of all pigs proved to be the solution – but in 2022 that solution should be considered “if not worst.”

While the drop in pork supplies has been replaced by more imports from the United States, the two experts think that in 2022 the island’s total pig population has dropped by 25% as a result of ASF.

How would you characterize the ASF situation in the Dominican Republic at the moment?

Dr Francisco Israel Brito: “They have formally found 1,000 outbreak locations. Keeping in mind that the Dominican Republic has an area of over 48,000 km², this number in such a small geographical area has led us to believe we have a very serious epidemiological situation.”

Prof Joaquín Paulino: “Of the 32 provinces in the Dominican Republic there are 29 provinces infected. The provinces that didn’t get infected (Azua, Hato Mayor and El Seibo) didn’t because the pork production there is minimal or almost absent. It is a situation that is very complex for our nation, which is now also fighting many economic problems as well as unemployment. Many people who used to work in pig production are now without work. It has cost the government over US\$22 million dollars for compensation purposes. The situation is very serious.”

How are the largest farms dealing with the outbreaks?

Dr Francisco Israel Brito: “The pig industry in the Dominican Republic is quite diversified. Prior to ASF there were over 25,000 producers. Of those, 90% were small producers, having fewer than ten sows

– and those are the ones that have been affected hardest. “The largest farm in the Dominican Republic has 2,800 sows. Just below that, there are various other farms with more than 1,000 sows – some of them were affected by the virus, especially a farm in Pinar del Río with 1,200 sows and another one, a multisite farm, also of 1,200 sows. Then there are various farms with 500 sows or more, of which some have also been affected. “In addition, the major genetics center, Biogenética, was affected by ASF virus in the beginning of February. This center, with very good biosecurity, had 200 sows and over 200 GGP sows with high genetic value, which contributed to a high degree to the development of the national swine industry.”

Is it possible to tell where the virus came from? To which strain does it have most resemblance?

Dr Francisco Israel Brito: “There are laboratory results. We are collaborating with the reference laboratory in Plum Island in New York. The diagnostics of the identification of the virus showed that it comes from Russia, according to the experts. In fact, at the moment there are three strains circulating in the Dominican Republic.”

These strains? Would that mean that there has been more than one infection, or has the virus mutated on the island?

Dr Francisco Israel Brito: “At the moment we haven’t determined whether there has been a mutation in the Dominican Republic. We do know that we have cases where the virus had very low pathogenicity, very different to occasions where the virus was very virulent. That is what led us to believe we have more than one strain of the virus present.”

What has been the effect of ASF on swine producers – do they still see a future for themselves?

Dr Francisco Israel Brito: “At the moment many smaller producers have left the industry. Medium producers have decreased production, and larger producers have also decreased production because of the fear of the disease getting onto the farm. And at the moment I don’t think there is anybody who is willing to invest in the industry.”

What has been the effect of ASF on pork prices in the Dominican Republic?

Dr Francisco Israel Brito: “In March 2022, prices were 9% higher in comparison to when ASF showed up in the Dominican Republic. Initially, as a consequence of the virus, the prices dropped by 20% because there was a significant drop in consumption. After that price levels went up again, that was mostly due to a significant reduction of pork on the market. Now consumption is back to normal. That the prices are higher than before is related to the higher price of raw materials.”

Prof Joaquín Paulino: “This recuperation of consumption is related to a campaign of making customers aware through radio, television, newspapers and all social media networks, set up by the Ministry of Agriculture. It is aimed at making the end user understand that ASF virus does not affect human health.”

And now the amount of pork on the market is the same again?

Dr Francisco Israel Brito: “At this moment the amount of pork in the market is the same again. Most Dominicans have the habit, likely to

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Pig Progress, April 2022



PIG PROGRESS



Americas – Dominican Republic

"We have various direct flights with the United States, as well as Panama, the south of Mexico, Chile, Colombia, Costa Rica and Venezuela. But basically the main communication is with the United States, where about 2 million Dominicans are living."



Dr Francisco Israel Brito,
president, Dominican
Federation of Pig Producers



Prof Joaquín Paulino,
Agricultural University ISA

"If ASF would leave the country, it would go on to affect more than 15 million sows, and around 250 to 300 million pigs would be affected. That would be a catastrophic economic loss not only for the American continent but also for the entire world and would also lead to unemployment."

Question 4...



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Question 4...



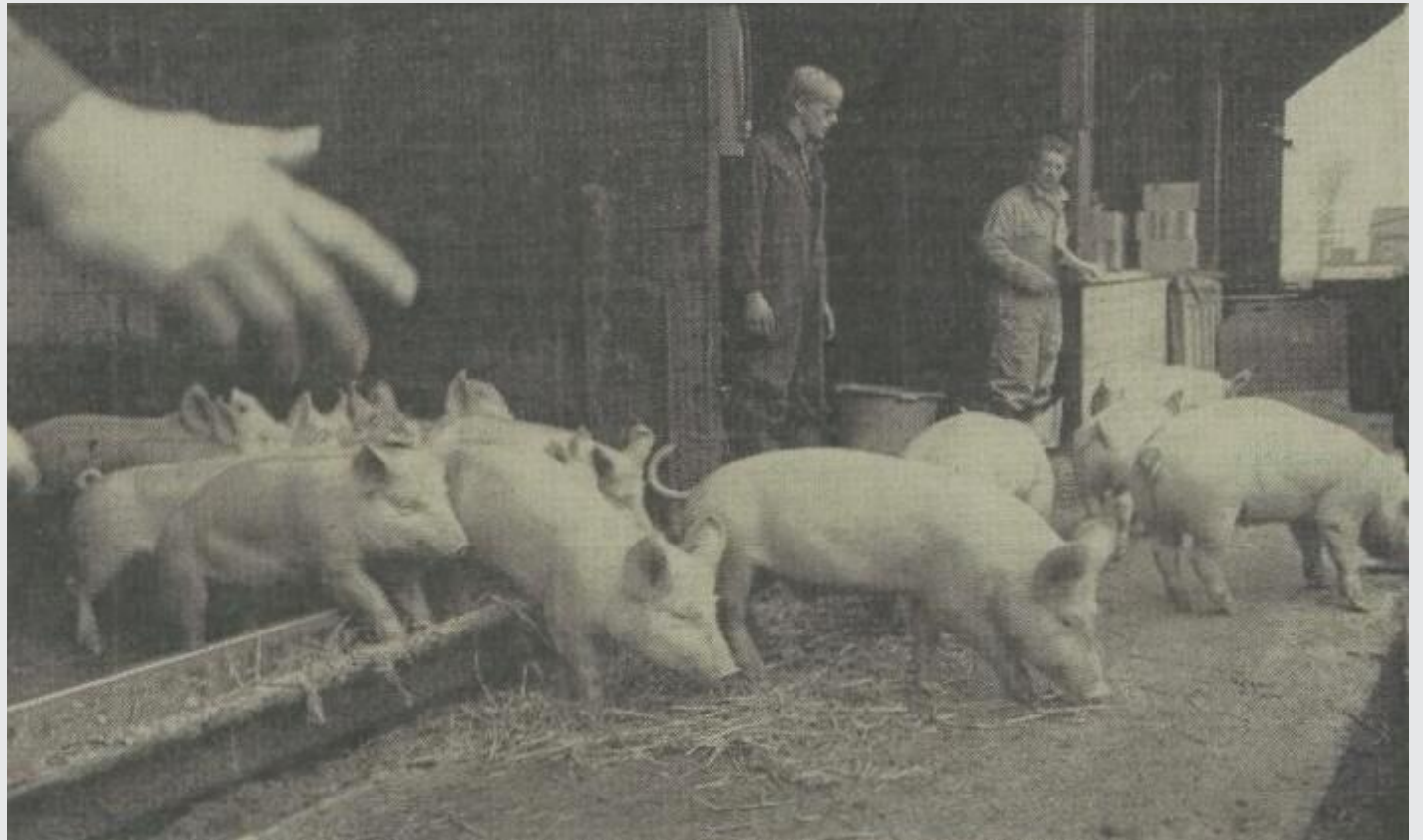
Airplane feed photographed on a farm near Paracambi, RJ, Brazil, 1978.

"We believe that it is probably attributable to a phenomenon that has been growing in recent years, and that is the dozens of boatloads of Haitian immigrants that have headed to the Bahamas, the US and elsewhere. And they arrive on these ships, often in poor condition and without fuel. [...] Sometimes they carried live animals and food, etc., and given the health conditions in the country, that is a risk even for public health."

Question 4...

- Also outbreaks in the Netherlands (Zoetermeer, early 1986)
- Feeding kitchen waste
- Two pig farms infected (800 yards in between them)
- 14 farms had animals culled (>5.000 pigs)
- Damage: 30 million guilders/week (£8.4m/week in 1986)
- October 1, 1986: free from ASF again

*Leidse Courant,
April 2, 1986*





Question 4...

Will ASF come to the UK?

- ☐ Most certainly.
- ☐ Absolutely not.
- ☒ There's a good chance.



Question 5

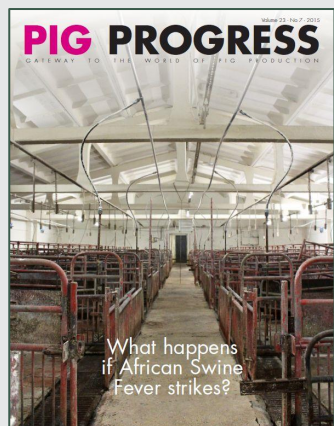


Question 5...

What do the authorities have to do to keep ASF out?

- ☐ Create more awareness.
- ☐ Preventive culling of all wild boar.
- ☐ Enhance security at ports of entry.

Question 5...



Question 5...

Claus Baltersen, CEO Idavang



"I have never seen anything like that. All you can do is just talk about it. Sows, good normal sows, suddenly breathing heavily. You know they are dying, they are suffering. We knew it must be a swine fever. They must have had blood exploding in their organs. If it is in the heart – they will die immediately. If it is in other organs, they die slowly – you just see it in their eyes."



Question 5...

Claus Baltersen, CEO Idavang



"In hindsight and from a distance, the cause of the deaths might seem ubiquitous. At that time, however, nobody thought that ASF really could be true. In the past, his farm has even been used as an example by the Lithuanian state vets to demonstrate how well biosecurity should be applied. So I was sure that ASF would not be able to get into the farm."

Question 5...

Claus Baltersen, CEO Idavang



"The outbreak started in one of the weaner pens, in the middle of the farm. That's why I think it must have been caused by bugs or insects – e.g. horse flies. There were a lot of them in July 2014. [...] Our theory is that there must have been a dead wild boar laying outside the farm. Some insects must have visited it and then came into the stables, stinging one of the pigs."





Question 5...

Cover, July 2022



PIG PROGRESS



Question 5...

Top pictures: Prof Iwona Markowska-Daniel,
Warsaw University of Life Sciences (SGGW), Poland



Bottom pictures: Petr Šatran, Czech
State Veterinary Administration



Question 5...

Cover, January 2020



PIG PROGRESS

Question 5...



PIG PROGRESS



Question 5...

What do the authorities have to do to keep ASF out?



Create more awareness.



Preventive culling of all wild boar.



Enhance security at ports of entry.



Question 6



Question 6...

Imagine, an infected wild boar gets found in the UK, then what?

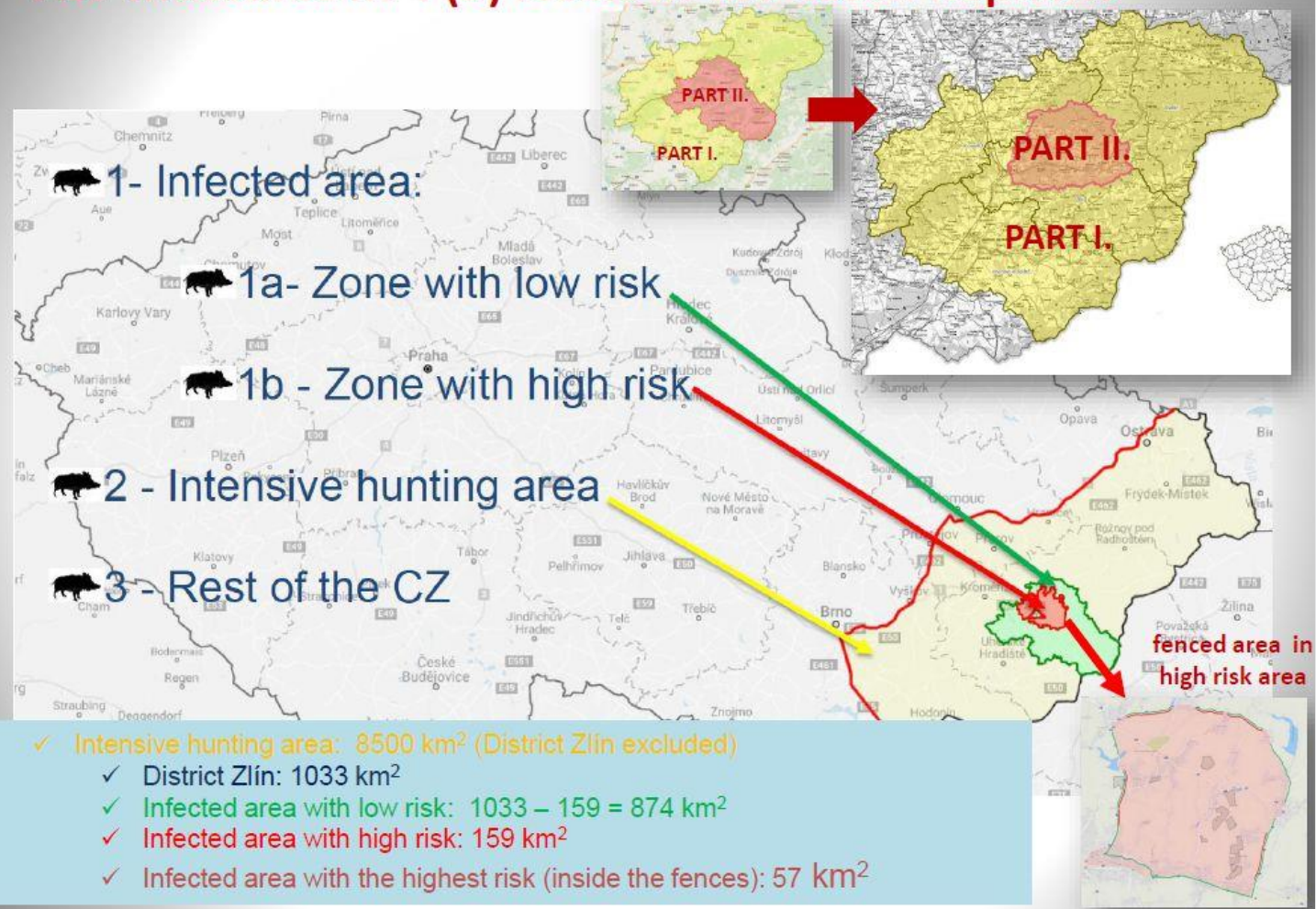
- ☐ Discrete disposal of the carcass.
- ☐ Culling all wild boar after all.
- ☐ Zoning and intelligent hunting.

Question 6...



Question 6...

ASF measures in 4 (5) levels in the Czech Republic



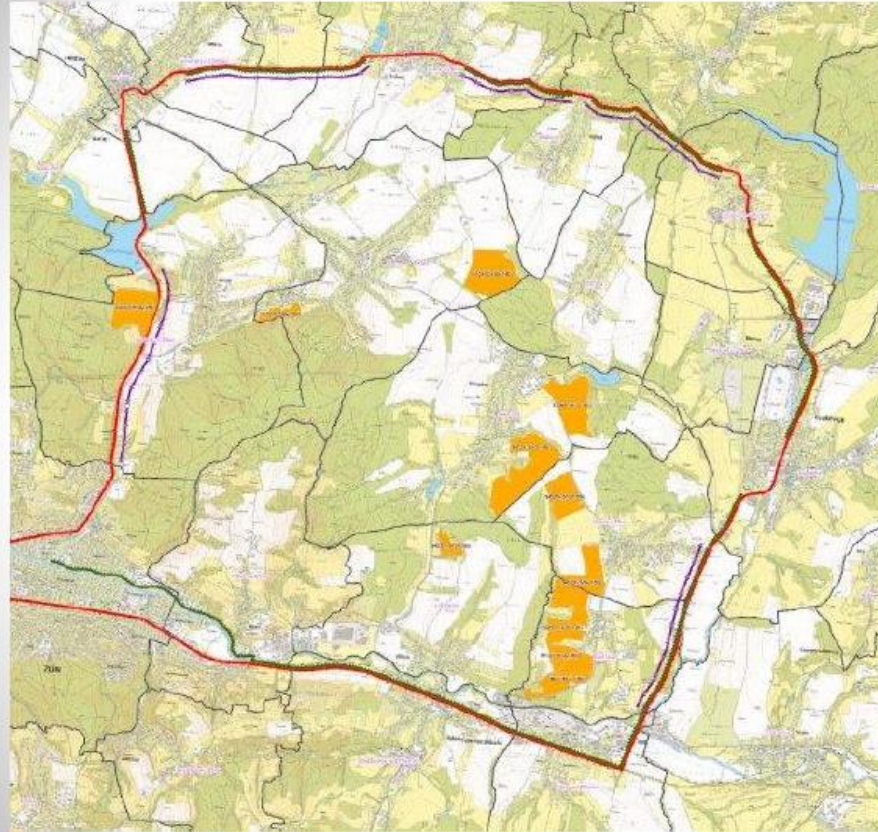
Source: African Swine Fever in wild boar in the Czech Republic (25 february, 2019)



Question 6...

Source: African
Swine Fever in
wild boar in the
Czech Republic
(25 februari, 2019)

Higher risk area (fenced area) - unharvested fields left



**115 hectares of unharvested fields (rape, maize and wheat)
were left for wild boars providing both food and shelter**





Question 6...

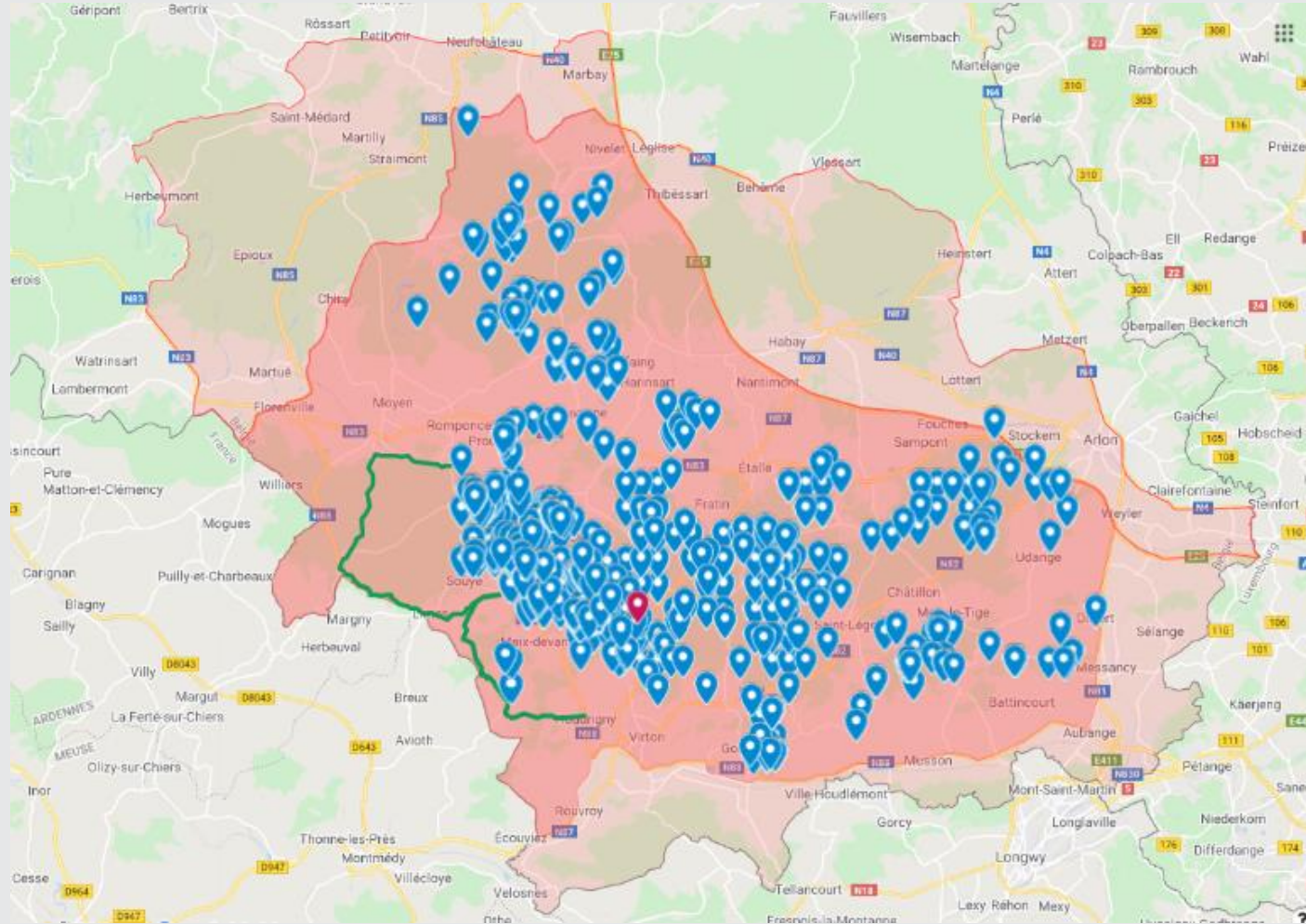
- The virus went around between **June 2017 and April 2018**.
- One of two EU countries declared **free from ASF**.
- All outbreaks took place around the city **Zlín**.
- No **domestic pigs** got infected.
- Between **220-230** dead wild boar were found testing positive for ASF (WOAH/ Czech data).
- **Intelligent** hunting.
- **Key factors**: Dedication, focus, cooperation and compensation.
- Important: role of **human** behaviour.



Question 6...

Belgium: 833
ASF victims
amongst wild
boar

*Pig Progress, January 24,
2020*

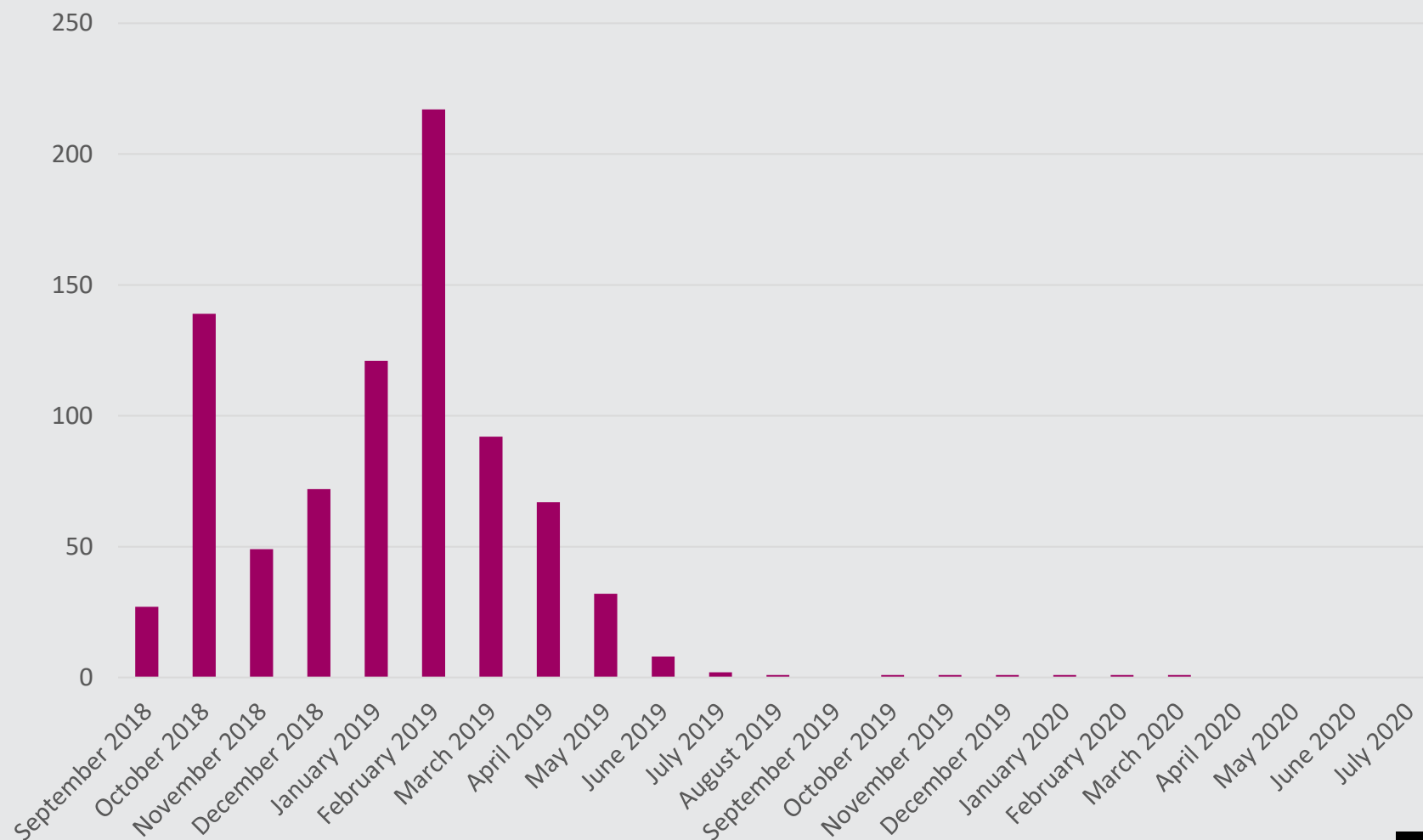


PIG PROGRESS



Question 6...

ASF in Belgium's wild boar population, Sept 2018-June 2020.





Question 6...

- Virus in Belgium: **September 2018 - March 2022**.
- All outbreaks in **Luxembourg** province.
- **No domestic pigs** got infected.
- About **4,000** domestic pigs were culled for preventive reasons.
- Altogether **833** infected wild boar were found (WOAH/EU).
- Zoning and **300 km** fencing according to EU regulations.
- Shooting of wild boar started in **June 2019**.
- Trade with “**third countries**” fell away → halving of export volume.
- Producer: For 1,000 finisher pigs earned €5,000 (**£4,400**) per week less.





Question 6...

Imagine, an infected wild boar gets found in the UK, then what?

- ☐ Discrete disposal of the carcass.
- ☐ Culling all wild boar after all.
- ☒ Zoning and intelligent hunting.



Question 7



Question 7...

What can you do as pig farmer to prepare against ASF?

- ☐ Nothing – I'm insured.
- ☐ Build an (extra) fence.
- ☐ Biosecurity, biosecurity, biosecurity.



Question 7...

"The Fortress Farm"



John Gadd





Question 7...

- Reduce **pig-to-pig** contact
- Perimeter **fence** with camera and microphone
- Limit **visits** to the farm
- **Shower** in/out
- How are **deliveries** accepted?
- Replacement stock needs strict **discipline**
- Sanitation of **vehicles**
- Proper use of **clothing** and **footwear**
- **Fly** control
- Use of **detergent** and **disinfectant**
- No visits to areas where **ASF is in progress**





Question 7...

What can you do as pig farmer to prepare against ASF?

- ☐ Nothing – I'm insured.
- ☒ Build an (extra) fence.
- ☒ Biosecurity, biosecurity, biosecurity.



Conclusion



Key take-aways

- ASF has near **100% mortality** and there is **no vaccine** (yet)
- ASF is likely to **stay around** for a while
- In wild boar ASFv spreads **slowly**, but humans can make it **fast**
- It's definitely feasible ASFv will cross the **Channel**
- **Awareness and preparation** is essential
- Tackling ASFv requires **cooperation, transparency and efficiency**
- **Biosecurity** should be top of mind for producers to keep ASF out



Contact



vincent.ter.beek@misset.com



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