

Swine Disease Global Surveillance Report

Worldwide pork production is highly interconnected by trade between countries and markets which could increase the risk of introduction of foreign pathogens into the US.

PROJECT

The aim of these reports is to have a system for near real-time identification of hazards that will contribute to the mission of assessing risks to the industry and ultimately, facilitate early detection and identification, or prevent occurrence of events, in partnership with official agencies, and with our international network of collaborators.

Monthly reports are created based on the systematically screening of multiple official data sources, such as government and international organization websites, and soft data sources like blogs, newspapers, and unstructured electronic information from around the world, that then are curated to build a raw repository. Afterward, a group of experts uses a multi-criteria rubric to score each event, based on novelty, potential direct and indirect financial impacts on the US market, credibility, scale and speed of the outbreak, connectedness, and local capacity to respond average is calculated. The output of the rubric is a final single score for each event which then it is published including an epidemiological interpretation of the context of the event.

These communications and the information contained therein are for general informational and educational purposes only and are not to be construed as recommending or advocating a specific course of action.



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www.swinehealth.org/global-disease-surveillance-reports/

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Swine Disease Global Surveillance Report

Tuesday, November 1, 2021 – Monday, December 3, 2021

Report Highlights

- **African Swine Fever (ASF) across Eastern Europe:** So far, the region reported 27% more cases of ASF than in 2020
- **ASF in Germany:** First outbreak in Mecklenburg-Vorpommern, the third state affected
- **ASF in Vietnam:** Authorities fear a possible local pork shortage due to the new wave of the disease

OUTBREAKS BRIEF

R	Location	Date	Dx	Impact
2	Rostock, state Mecklenburg-Vorpommern, Germany	11/15	ASF	Finisher site with 4,030 pigs on-site.
2	Mecklenburg-Vorpommern state, Germany	11/26	ASF	4 ASF positive wild boar.
2	Multiple locations across the country, Vietnam	Oct/Nov	ASF	Currently, the country has 901 communes of 43 provinces and cities with ASF less than 21 days.
2	Multiple locations in the north peninsula, Haiti	Sept	ASF	10 new cases. The OIE was informed several weeks later.
1	Taiyang Village, Hainan Island, China	11/8	ASF	A total of 1063 animals were destroyed (last occurrence, May 2015).
1	Danyang and Jechon, North Chungcheong Province, South Korea	11/15	ASF	The first 2 confirmed wild boar cases in the province
1	Kanakham district, Vientiane Province, Lao People's Democratic Republic	11/19	ASF	10 diagnostic specimens collected from sick pigs tested positive for ASF.
	Multiple locations, Russia	Nov	ASF	12 outbreaks in domestic pigs. 7 were larger premises with >100 pigs.
1	Manitoba, Canada	11/25	PED	14 outbreaks since October 25.

Outbreaks described in the table above are colored according to an assigned significance score. The score is based on the identified hazard and potential it has to affect the US swine industry. Rank (R) Blue: 1 - no change in

status; Red: 2 - needs extra attention as the situation is dynamic; Black: 3 - requires consideration or change in practices to reduce exposure to the US swine industry. A map with the location of the events reported is available at the end of this report.

African Swine Fever

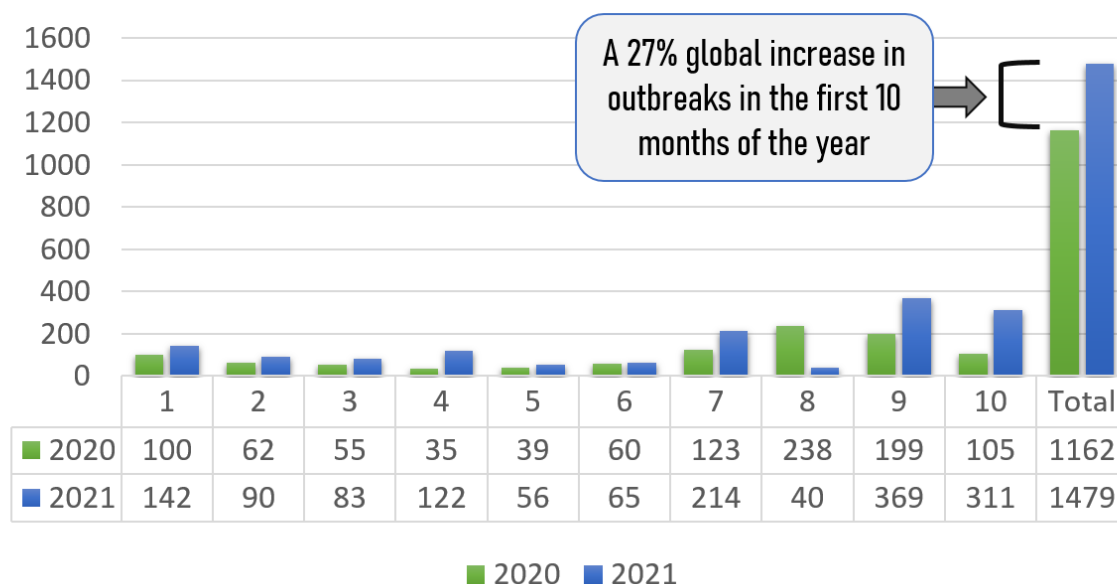
EUROPE

In November, six countries, including Bulgaria, Germany, Romania, Slovakia, Ukraine, and Russia, reported new ASF outbreaks in domestic pigs. Only three European countries reported the disease in October. Meanwhile, 12 countries, including Bulgaria, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Slovakia, Ukraine, and Russia, reported cases of ASF in wild boar (European Commission Animal Disease System (ADNS); OIE).

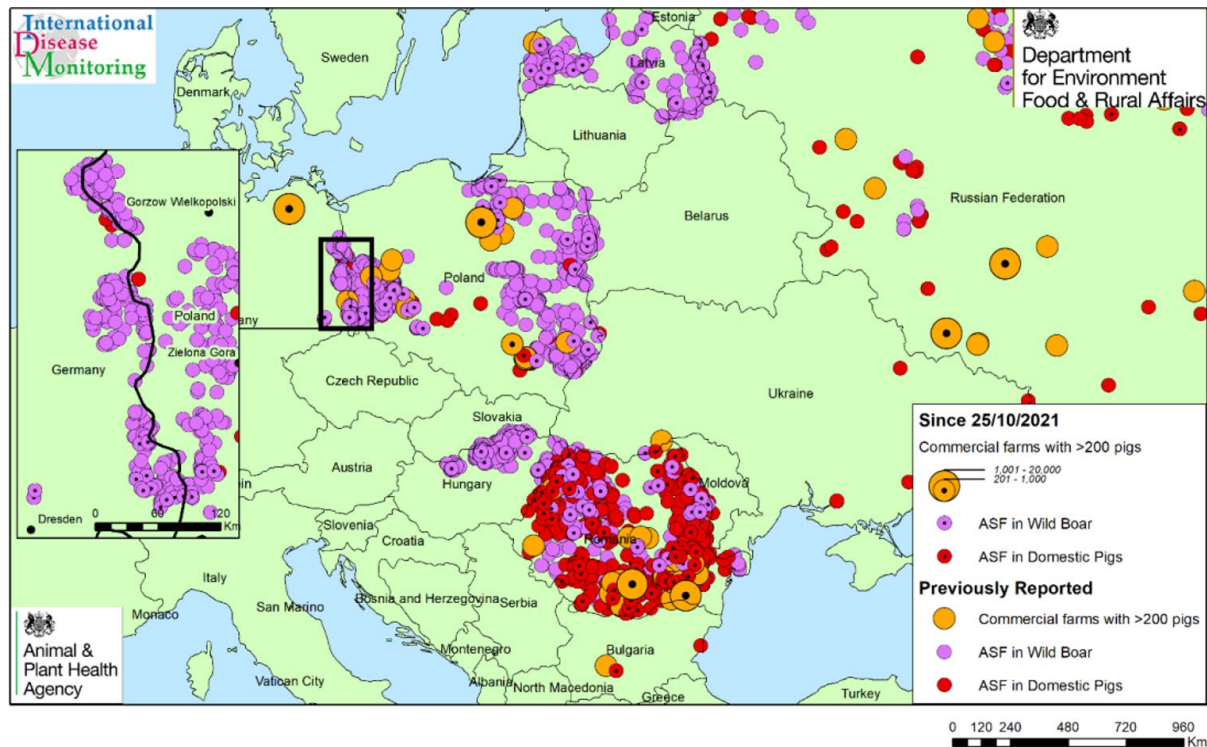
The latest update from ADNS includes the total number of ASF outbreaks among European wild boar, which so far this year lies at 10,614 across 12 countries (as of November 21). Compared with the previous update on October 23, this figure represents an increase of 732 outbreaks (a 50% increase compared to the reports of October).

Since the beginning of 2021, European countries have registered 1,761 outbreaks in domestic pigs, 278 of them in the month of November (a 78% increase compared to the total reported in October). (21/11_EC ADNS disease outbreaks report/).

Domestic Pig Outbreaks 2020 - 2021 in Eastern Europe



Graphic 1. ASF outbreaks in domestic pigs across Eastern Europe. Comparative 2020 - 2021. (Source: ADIS).



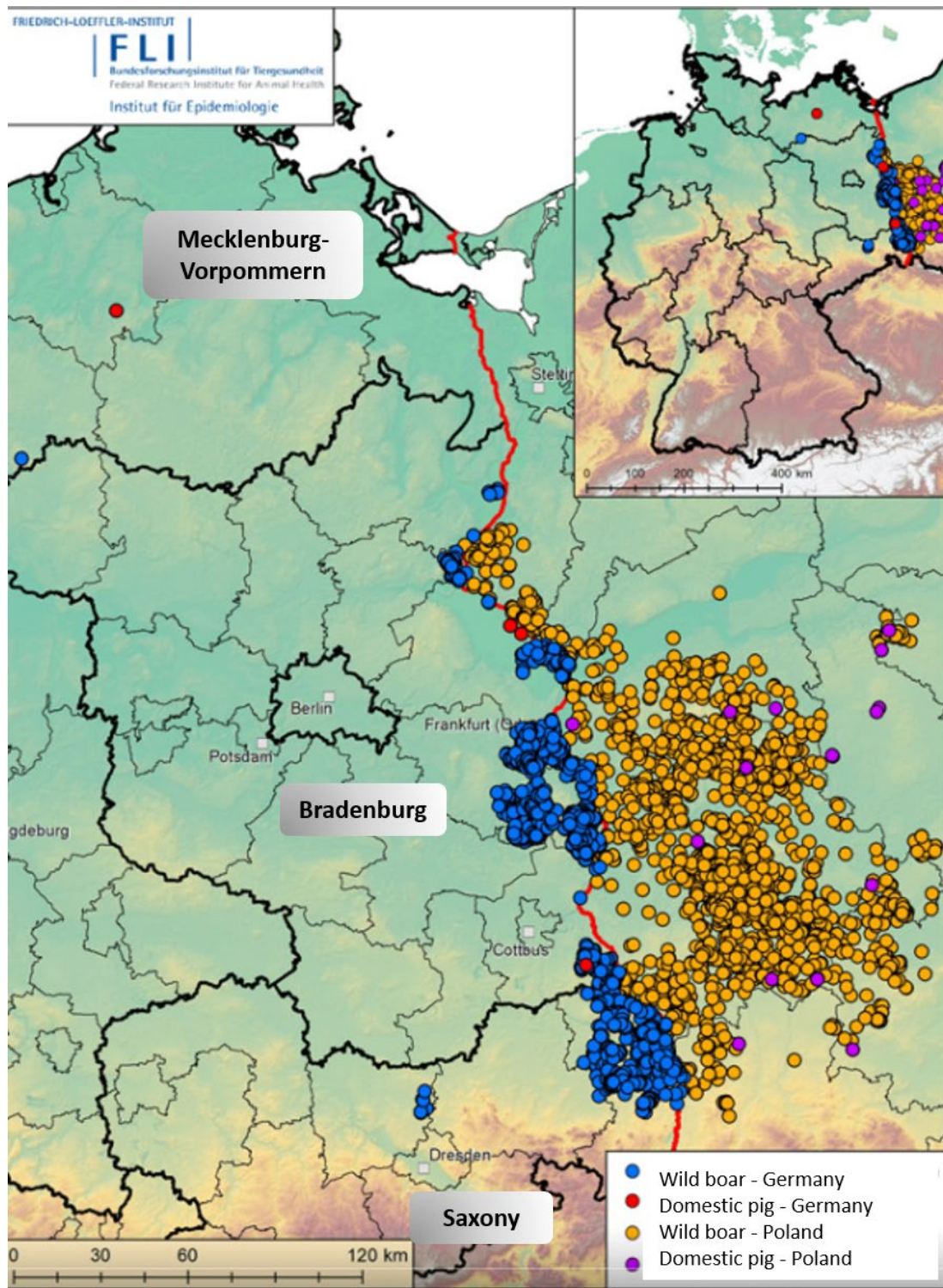
Map 1. Distribution of outbreaks in Europe 2021- Map prepared by International Disease Monitoring group (IDM), Animal & Plant Health Agency, (DEFRA-UK).

Germany

Since our last report, Germany confirmed a new outbreak of ASF in domestic pigs in Germany, at a large commercial premise, in the eastern state of Mecklenburg-Vorpommern, next to Brandenburg to the north (Map 2). With this report, all states in Germany bordering Poland have reported outbreaks of ASF.

- The virus was confirmed on a finisher pig site with 4,038 pigs on-site in the city of Rostock. This is the first report of ASF in this state and is approximately 120km from previously reported cases in wild boar and 150km away from the nearest outbreak in domestic pigs in Germany.
- At a press conference, state authorities explained that on November 12, various animals started having suspicious symptoms and dying, followed by 25 over the weekend and another 20 on Monday. Initial PCR tests turned out to be positive (diagnostic done by Germany's national reference laboratory, the Friedrich-Loeffler-Institut). All pigs on the farm were culled, and the regular ASF zoning and surveillance are being applied.
- Later, authorities recorded on November 24 the first case of ASF in a wild boar in Mecklenburg-Western Pomerania (Ludwigslust-Parchim district). On November 26, three further cases were confirmed in wild boar killed in the immediate vicinity.

Germany is continuing with a robust surveillance program with approximately 8,300 samples tested from domestic pigs, the majority of these (4,296) have been from Saxony. Germany has implemented a thorough control program, with no feeding material to come from core areas (areas where ASF has been detected) unless heat-treated or stored for six months, a purchasing program for backyard holdings (where the state offers to buy pigs from farmers with less than 10 pigs, for €200 each, if they agree to not to keep pigs on the premises for a period of two years); 15 backyard holdings have accepted this offer so far. There has been a prohibition of events/exhibitions with pigs, and further work to identify pig owners that are also hunters with increased controls on their holdings (Source: DEFRA, IDM report). Access to the translated version of [Radar Bulletin report - \(FLI\)](#).



Map 2. ASF outbreaks in Germany and Poland (Source: FLI; data source ADIS, 11-26-2021)

Regional highlights:

- **Russia:** Since our last report on October 25, Russia has reported 12 outbreaks in domestic pigs to OIE, of which seven were larger premises with >100 pigs (the largest containing 17,888 pigs).
- **Poland:** In November, authorities batch reported outbreaks in domestic pigs to the OIE. In total, 120 cases were confirmed, with the confirmation surpassing the total number of outbreaks registered in 2020 (n=103), being the highest since ASF was first reported in 2014. So far, there have been 29 outbreaks reported in Western Poland -- region bordering Germany. Another significant increase compared to the 2020 total count, with only 12.
- **Romania:** The whole country is considered under Zone III restrictions and unable to export pork products. Numerous outbreaks (78) were reported again in the reporting period. Again, almost exclusively smallholdings were affected, but also two farms with 13,000 and 62,000 animals in the southeast of the country near the Black Sea coast.

Further reading: [DEFRA Updated Outbreak Assessment #23 - African swine fever in Eastern Europe and Germany](#)

ASIA

In November, six countries - South Korea, Vietnam, China, Indonesia, The Philippines, and Lao - reported new ASF outbreaks in pig farms.

Vietnam

As of November, authorities have culled more than 231,000 pigs due to ASF as the virus continues to spread across the country. **Although this only accounts for 0.8% of the total herd, it is nearly three times higher than the same period in 2020.**

On November 28, Dr. Van Long, Deputy Director of the Department of Animal Health (Ministry of Agriculture and Rural Development - Agriculture and Rural Development), said that since early this year, ASF has affected 2,275 communes in 57 provinces and centrally-run cities (out of 58). Over 231,000 pigs have been forced to be culled with a weight of over 10,000 tons, an increase of more than two times compared to the same period in 2020.

Currently, 901 communes of 43 provinces (of 58) and cities affected by ASF, within the last 21 days

Meanwhile, the Ministry of Agriculture and Rural Development (MARD) has warned that the disease is likely to spread further, affecting the supply of pigs for the coming peak season in January.

On November 25, the Prime Minister of Vietnam issued a new Directive No. 32/CT-TTg (translated version available through this [LINK](#)) on implementing overall solutions to prevent and control ASF.

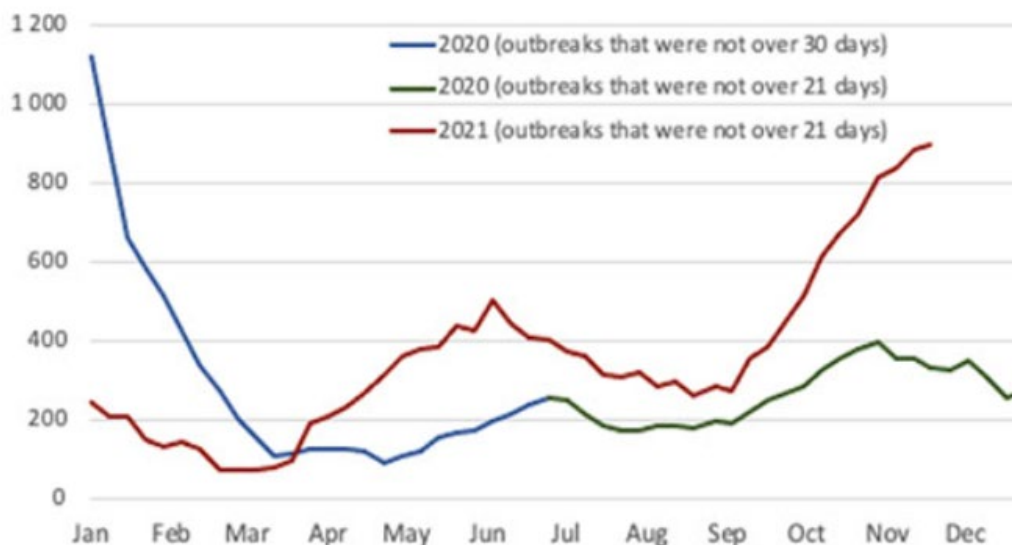


Figure 2. ASF outbreaks in Vietnam

On the local news, producers have also stated the need to access diagnostic tests since this new wave coincides with the recurrence of other diseases such as PRRS and classical swine fever.

Below, some examples of spikes of spread throughout the country:

PROVINCE/REGION	SUMMARY	LINK
Thanh Hoa (central region)	From the end of September 2021 until now, spreading in 37 communes of 8 districts, farmers were forced to destroy more than 1,900 pigs, equivalent to over 122,000 kg.	LINK
Ha Giang and Quang Nam provinces (Northern border with Chinese province, Yunnan)	In Ha Giang, provincial authorities reported destroying over 100 tons of ASF-positive pigs. The center of the outbreak is Vi Xuyen district, with more than 335 farms with infected cases. Meanwhile, in Quang Nam province, the ASF outbreaks are affecting Dai Loc district, with 1360 farms, where more than 367 tons of infected pigs were culled. It is the first time in several months that an ASF case has occurred.	LINK
Ha Tinh (province on the north-central coast)	Currently, Ha Tinh is one of the most affected by the virus. It has an inventory of 383,000 pigs, 42% of which are held by small-scale independent farms. The disease has spread to 18 communes, wards, and towns in 9 districts of this province. Currently, Ha Tinh still has more than 25 outbreaks, less than 21 days.	LINK LINK

According to national regulation, all traders and slaughterhouses must prove that the pigs are ASF-free and specify the origin and destination for slaughtering pigs.

MARD is cooperating with provincial authorities to closely monitor the disease situation and apply control measures to prevent its spread. The agency continues to require veterinary staff to visit swine farms and guide farmers on how to disinfect farms and enhance biosecurity measures to prevent infection.

Regional highlights

- **The Philippines:** In November, the Department of Agriculture confirmed ASF detection in M'lang (North Cotabato province) in six barangays (smallest administrative division in the country), and in Maigo and Bacolod town (Lanao del Norte province), both on Mindanao Island; 234 pigs were culled in two infected towns of Lanao del Norte.
- **Lao:** On November 19, 2021, 10 diagnostic specimens collected from sick pigs at Dongkha village, Xanakham district, Vientiane province tested positive for ASF.
- **South Korea:** On November 19, MAFRA announced the plan for additional designation of ASF key control areas; besides the existing ASF key control areas designated in November 2020, a total of 17 cities and counties in Gangwon-do, Gyeonggi-do, Chungcheongbuk-do, and Gyeongsangbuk-do were additionally selected based on the risk factors of ASF spread including geographic factors, movement of transmitters, topography, and migration of contaminant through the water system.

The AMERICAS

Haiti

In November, after the first detection of ASF in the southeastern corner of the country in Belle-Anse province in September, Haitian authorities reported 10 new outbreaks in the north of the peninsula (Map 3).

Map 3. Distribution of ASF outbreaks in Haiti



RESEARCH HIGHLIGHT

Porcine deltacoronavirus infections among Haitian children

[Full article - Open access](#)

In this publication, researchers explore the potential for evolutionary change and adaptation leading to human infections by coronaviruses outside of the previously recognized human-associated coronavirus groups.

They identified porcine deltacoronavirus strains in plasma samples of three Haitian children with acute undifferentiated febrile illness. Genomic and evolutionary analyses reveal that human infections were the result of at least two independent zoonoses of distinct viral lineages that acquired the same mutational signature.

This is the first report of PDCoV infection in humans, consistent with viremia and systemic dissemination. The recent divergence of human strains detected in Haiti from their closest pig strains detected in China and the USA in the phylogeny highlights how little is known about the spreading of PDCoV and its introduction in Haiti. Recent data regarding the movements of live pigs and meat into the country are lacking, and movements of pigs and their pathogens across the globe can be unexpectedly complicated to track, stressing the need for further studies.

Further serological studies will be needed to identify the frequency with which such infections occur in the general Haitian population, cautioning that serological studies may be complex because of possible cross-reactivity with human endemic coronaviruses. Nonetheless, the data highlighted the potential for PDCoV zoonoses in human populations, especially in rural or less-developed regions where contact with domestic animals is common.

These findings, however, are consistent with a virus maintained in the swine population and are capable of successful spillover in humans.



References:

Recurrent reports reviewed

OIE - [WAHIS interface - Immediate notifications](#)
OIE - [OIE Asia Regional office](#)
FAO - OIE - [WAHIS interface - Immediate notifications](#)
DEFRA - [Animal conditions international monitoring reports](#)
CAHSS - [CEZD Weekly Intelligence Report](#)
European commission - [ADNS disease overview](#)

EUROPE

Germany

<https://www.pigprogress.net/Health/Articles/2021/11/ASF-Germany-Virus-pops-up-in-farm-near-Rostock-818505E/>

<https://www.pigprogress.net/Health/Articles/2021/11/ASF-Germany-1st-Wild-boar-case-in-Mecklenburg-Vorpommern-824014E/>

AMERICA

Dominican Republic

SITUACIÓN ACTUAL DE FIEBRE PORCINA AFRICANA - Informe Técnico - Semanas Epidemiológicas 30-41
Haiti

<https://www.pigprogress.net/Health/Articles/2021/11/ASF-Haiti-Virus-spreads-to-the-north-of-peninsula-824556E/>

Canada

<https://www.ontariofarmer.com/livestock/ped-explodes-in-manitoba>

ASIA

Vietnam

<https://www.asian-agribiz.com/2021/11/30/230000-pigs-culled-as-asf-rages-in-vietnam/>

<https://www.asian-agribiz.com/2021/10/19/asf-still-the-major-challenge-to-vietnams-pig-industry/>

<https://www.asian-agribiz.com/2021/11/22/more-outbreaks-push-up-demand-for-asf-tests/>

<https://thoibaotaichinhvietnam.vn/chi-dao-dieu-hanh-cua-chinh-phu-thu-tuong-chinh-phu-noi-bat-tuan-tu-22-2611-96238.html>

South Korea

<http://www.pigpeople.net/mobile/article.html?no=7260>

The Philippines

<https://www.pna.gov.ph/articles/1160157>

<https://www.pna.gov.ph/articles/1159624>

China

<https://wahis.oie.int/#/report-info?reportId=42294>

The GSDMR team compiles information drawn from multiple national (Ministries of Agriculture or Livestock, Local governments, and international sources (FAO, OIE, DEFRA, EC, etc.), as well as peer-reviewed scientific articles. The team makes every effort to ensure but does not guarantee accuracy, completeness, or authenticity of the information. The designation employed and the presentation of material on maps and graphics do not imply the expression of any opinion whatsoever on the part of the GSDMR team concerning the legal or constitutional status of any country, territory, or sea area or concerning the delimitation of frontiers.

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