

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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Current and previous reports:

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

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Swine Disease Global Surveillance Report

Tuesday, May 2, 2022 – Friday, June 3, 2022

Report Highlights

- **First ASF vaccine to be available in Vietnam:** NAVET-ASFVAC authorization announced by Vietnam authorities - receives the support of USDA's Agricultural Research Service.
- **ASF in Germany:** Alarm in western Europe after the report of the first case in domestic pigs in the south of the country - less than five miles from the French border.
- **ASF in Italy:** four months after the first case in Piedmont, another 15 new cases confirmed in the Lazio region - 250 miles southeast of the cluster in northern Italy.
- **First ASF report in Nepal:** becoming the 17th Asian country to report the disease.
- **WAHIS 2021 report:** The WOA's general assembly (former OIE) report highlights the current animal health situation based on the notifications and reports from member countries; the median time from disease confirmation to report submission increased by two days compared with the 2005-2020 period.

OUTBREAKS BRIEF

R	Location	Date	Dx	Impact
2	Baden-Wurttemberg (south region), Germany	5/26	ASF	Outbreak reported on a farm - 35 affected pigs.
2	Rome and Rieti (Lazio region), Italy	5/4	ASF	15 ASF positive wild boars have been detected so far.
2	Multiple locations (Bagmati province), Nepal	5/16	ASF	At least 10 outbreaks have detected - 5,167 pigs affected.
1	Sai Kung, Hong Kong	5/30	ASF	ASF wild pig carcass detected under the government's ASF surveillance program.
1	Zamboanga barangays, The Philippines	5/29	ASF	First report of ASF in the region - 14 backyard farmers were affected.
1	Hongcheon (northeast region), South Korea	5/26	ASF	Over 1,500 pigs affected.
1	Java and Aceh provinces (multiple locations), Indonesia	5/12	FMD	Over 243 farms confirmed FMD outbreaks

Outbreaks described in the table above are colored according to an assigned significance score. The score is based on the identified hazard and potential to affect the US swine industry. Rank 1 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

First African swine fever vaccine to be commercially available developed in Vietnam in partnership with the United States Department of Agriculture

After years of development and testing for efficacy and safety, the first commercial ASF vaccine has been developed by Vietnam, with collaboration from scientists from the USDA's Agricultural Research Service. This announcement was made at a press conference conducted by Vietnam's Ministry of Agriculture and Rural Development on June 1, 2022. The vaccine, NAVET-ASFVAC, is a product of Navetco National Veterinary Joint Stock Company, and it was created using an African swine fever virus strain with the I177L gene deleted. According to official sources ([LINK](#)), on Friday (June 3), is expected that the ministry will officially award a circulation license.

According to Trn Xuân Hnh, Deputy General Director of Navetco Company, the vaccine price ranges from VN34,000 to 36,000 (USD \$14-16) per dose, similar to the vaccine against blue ear disease. This vaccine will be available for export at some point, but no date has been set.

EUROPE

ASF continues to spread among domestic pigs in the European region. Thus, in May (05/02/2022-05/27/2022), five countries - Moldova, Germany, Slovakia, Russia, and Romania - reported 18 new farm outbreaks.

Meanwhile, the number of countries reporting ASF outbreaks in wild boars decreased from 12 to nine (Bulgaria, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, and Slovakia). Compared to the previous month, Estonia, Northern Macedonia, and Russia did not report new outbreaks during May.

Since January, the number of ASF outbreaks in wild boars has increased to 3622 (as of May 20), compared to 3254 in the previous month. Overall, 331 outbreaks (as of May 18) were registered. The most significant number of ASF outbreaks in wild boars was reported in Germany (n=89), followed by Poland (n=79) and Hungary (n=57), according to the latest reports (European Commission Animal Disease Information System (ADIS), OIE-WAHIS, EMPRES-i FAO).

Regional Highlights:

Germany

ASF outbreak on a finisher farm in the South of Germany

On May 26, an ASF outbreak was confirmed on a backyard pig farm in the state of Baden-Württemberg, which is 6 kilometers away from the French border (Map 1). As a result, 16 animals died - suggesting that the virus had been on the farm for a few weeks - and 19 were culled. Authorities stated that there is no indication that ASF has been passed on to the wild boar population in the area.



Map 1. Location of the first reported outbreaks of ASF in a pig farm in Germany.

The outbreak was registered approximately 380 miles (600 km) from the closest report of ASF in Germany, representing a significant westward jump across the country with no nearby detections of wild boars. According to the [DEFRA's May report](#), the human-mediated spread is more likely to take place. Despite stringent biosecurity on the farm, measures could be compromised due to the 140 casual and seasonal workers picking fruit and vegetables on the same premises.

Italy

ASF reaches Rome

In May, 14 infected wild boars were found for the first time in the Riserva Naturale dell'Insugherata, a natural park in the northwest of Rome, between the outskirts and the city's ring road. The first case was reported on May 4, when the wild boar in a pre-agonic state was found in the park 5 km from both Rome's inner city as well as Vatican City, which is 250 miles (400 km) away from the cluster in northern Italy (Piedmont and Liguria). In Rome, the source of infection is most likely to be human mediated, with garbage management, passages between parks and the city, and feeding by people all implicated ([PAFF 2022b](#)). On May 26, another positive carcass was discovered in the neighboring province of Rieti over 75 miles (50 km) away from the cluster of cases closer to Rome.

Industry outcry

The presence of the virus in outbreaks hundreds of miles away from the initial outbreaks shows how the pathogen is now able to move with great ease throughout the territory. In an interview, the producers' association authorities stated, "*The current 15 million for biosecurity measures on farms are no longer sufficient - ASF is rampant in Lazio and is dangerously threatening Umbria, Abruzzo, and Tuscany, putting a national population of 9 million heads at risk.*"

These most recent developments in Germany and Italy serve as a reminder of the ability of ASF to spread long distances to a previously unaffected region, often via human-mediated routes, as was observed in Belgium in 2018.

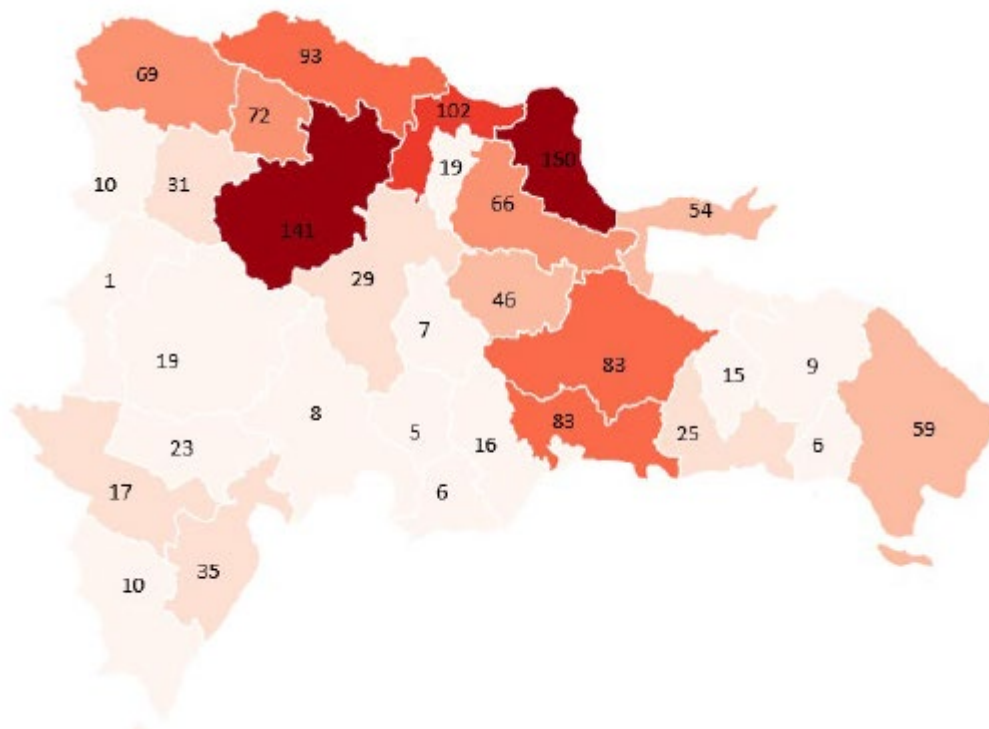
Other regional highlights:

- **France: is on high alert due to the ASF outbreak less than 10 km from its border.** The Plan for the Prevention of ASF, established in February 2022, has been activated immediately after notification of an ASF outbreak on a farm in Germany to include the strengthening of the surveillance of wild birds, a complete enumeration of all pig and boar holders, as well as an evaluation and further support of the biosecurity measures on pig farms.
- **EU: the EU banned the export of pork products from the ASF-infected zones in Italy.** As a response to the new ASF outbreak near Rome, on May 16, the European Commission issued emergency measures, which require establishing an infected zone for ASF in areas of Rome and implementing special control measures to stop it from spreading, including prohibiting the transportation of pork products from infected zones to the Member States and other third countries. The ban will continue until August 31, 2022.

AMERICA

The Dominican Republic

Since the start of the epidemic (period between July 25, 2021 - May 21, 2022), only 221 of the 1,310 confirmed outbreaks (by the Dominican authorities) have been reported to the OIE (last follow-up report - 2/16/22). The total loss of animals throughout these 221 outbreaks is over 18,000. Most of these reports are from backyard premises with less than 100 pigs, although some feature community-style backyard operations with up to 1,000 pigs.



Map 2. Distribution of confirmed accumulated cases of ASF in the Dominican Republic since the first case in July 2021.

The Epidemiology Division, Department of Animal Health (DAH), Directorate of Livestock, Ministry of Agriculture in the Dominican Republic, implements the early alert reporting system, where all suspected cases are reported. There are some backlogs in their submission to OIE, inherent to the burden and challenges associated with investigating each reported suspected case.

In May, authorities confirmed by molecular diagnosis 68 new outbreaks, bringing the total of accumulated confirmed cases to 1,310 distributed in 30 provinces; 1,015 of those outbreaks have been resolved (Map 2).

Since the beginning of the outbreak, samples from over 3,045 production sites have been taken and processed by Dominican veterinary services; 412 of them during the last month (the period between 4/22 and 5/21), from which 68 tested positive for ASF.

It is important to note that the positive rate has changed since November (from over 40% to 16%), denoting the progressive efficacy of control efforts across the country (Figure 1). Still, the active spread of the virus throughout the population is of great concern.

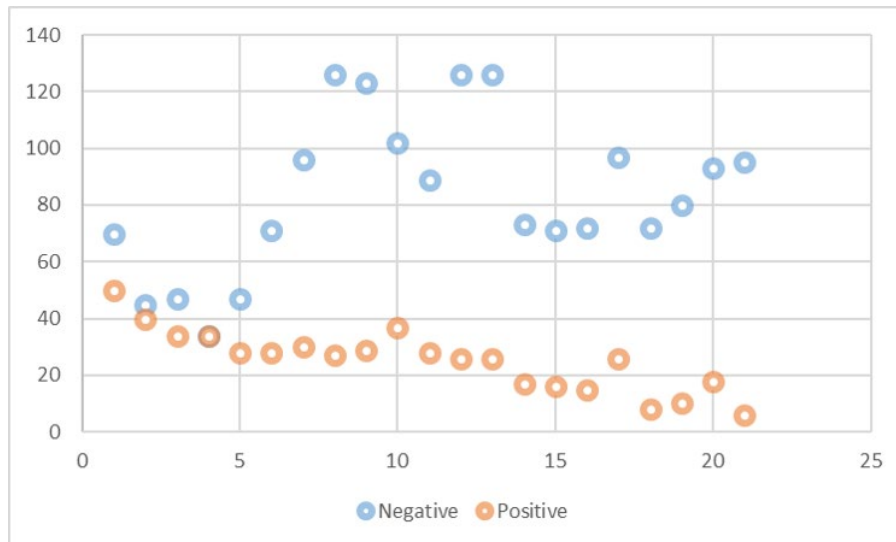


Figure 1. Distribution of positive and negative cases for ASF in DR by week since the beginning of 2022

ASIA

In May, five countries - India, Nepal, The Philippines, Thailand, and South Korea - reported ASF outbreaks in domestic swine. South Korea additionally reported ASF outbreaks in wild boar.

Regional highlights

- India:** On May 18, the Mizoram state ASF coordination committee held a meeting to discuss the steps being taken to tackle the disease affecting the pigs in the state. Since the first case was reported in Lunglei district in March 2021, as many as 33,417 pigs have died in the state due to the disease, and another 10,910 pigs have been culled. The outbreak has affected 9671 families in the state.
- Nepal:** Nepal reported its first case of African Swine Fever in pigs, according to the World Organization for Animal Health. Local news outlets reported that 934 pigs have been culled in six municipalities in Nepal's capital, Kathmandu. As of May 20, 2022, Nepal had reported 1,426 susceptible domestic pigs and 1,364 active cases of African Swine Fever.
- Thailand:** On May 24, 2022 Authorities reported to the World Organization for Animal Health an outbreak of ASF in Wiang Sa, in the rural province of Surat Thani, involving 10 cases and 10 deaths of domestic pigs. All affected pigs were destroyed.
- South Korea:** The food and agriculture ministry reported a case of ASF on a farm in Hongcheon County, Gangwon Province. All 1,500 pigs on the farm have been destroyed, and authorities are performing outbreak investigations on all neighboring farms. On May 27, 2022, the country

reported six cases of ASF in wild boar in the city of Gangneung, Kang-won-do province. According to the notification to the World Organization for Animal Health, of the six wild boar cases, five were dead, and one was destroyed. The latest outbreak marks the first time in over seven months for the fever to be detected on a pig farm in the country.

Swine Influenza (SI)

EUROPE

Germany

One laboratory-confirmed human case of infection with a swine-origin influenza A(H1N1) virus reported in North Rhine-Westphalia, in the west of Germany.

On May 29, 2022, Germany notified [WHO](#) about a confirmed case in a 30-40 year old male who showed influenza-like symptoms on March 29, detected during routine sentinel surveillance for influenza. Influenza A virus was confirmed in a nasal swab sample on March 29, while whole genome sequencing pointed to a Eurasian avian-like swine A(H1N1) virus (May 5). It was noted that the individual had no previous contact with swine. However, he lived in a region with many swine farms and had contact with swine farmers.

AFRICA

Ghana

Health authorities confirmed an outbreak of H3N2v, locally known as the Hanz virus. At least 15 players of the premier league team dey received treatment in the hospital after they fell sick.

H3N2v

Influenza viruses that normally circulate in pigs are called “variant” viruses when they are found in people. The H3N2v was first identified in U.S. pigs in 2010. In 2011, 12 human infections with H3N2v were detected. During 2012, there were multiple outbreaks of H3N2v, resulting in 309 reported cases. Sporadic infections with H3N2v have continued to be detected since that time. Infections with H3N2v have primarily been associated with prolonged exposure to pigs at agricultural fairs. Limited human-to-human spread of this virus has been detected in the past as well, but no sustained or community spread of H3N2v has been identified at this time. Sporadic infections and even localized outbreaks among people with this virus may continue to occur. [Link to CDC source.](#)

TOPIC Focus

89th OIE General Session - Current Animal Health Situation Worldwide

WAHIS 2021 Report / [LINK](#)

Patterns in Immediate Notification submission time

In accordance with Chapter 1.1. of the OIE Terrestrial Animal Health Code and the Aquatic Animal Health Code, OIE Members are required to submit an immediate notification (IN) for any of the exceptional events of OIE-listed diseases described in the OIE Codes, **within 24 hours of confirmation of the event**. However, this requirement is not always complied with for reasons such as a lack of proper communication at the country level among diagnostic laboratories, local and central Veterinary Services, technical delays in filing the information in OIE-WAHIS, and a lack of country transparency. Considering all the INs for OIE-listed diseases submitted during the period 2021 and early 2022, the median time from disease confirmation to report submission (ST) was 5 days: 4.8 days for terrestrial animal diseases. Considering specifically the most frequently reported diseases (AI, ASF, and FMD), the ST was respectively 4.4, 4.5, and 4.7 days. For the sake of comparison, the median ST for the period 2005-2020 was 3 days for terrestrial animal diseases and 10 days for aquatic animal diseases.

Contribution of epidemic intelligence to transparency and timeliness in reporting

In 2002, **to minimize the number of unreported events meriting an IN and improve the transparency and timeliness of the notifications**, the OIE established active searching activities to track non-official information, rumors, and signals relating to animal health and public health events around the world. **Since 2018, advanced software applications have been used to perform epidemiological intelligence activities**. Currently, the OIE retrieves information from a variety of sources, using two platforms for automatic search (the International Biosecurity Intelligence System [IBIS], managed by the government of Australia, and Epidemic Intelligence from Open Sources [EIOS], managed by WHO), as well as formal communications from the network of OIE Reference Laboratories and Collaborating Centres. Another important source of information is the Global Early Warning System (GLEWS) set up by the Tripartite members to enable early detection of high-risk and emergencies, coordinate the response at the human-animal interface and share information between the three Organizations to ensure transparency.

Whenever the OIE detects relevant non-official information from a reliable source, the country concerned is contacted for clarification and subsequent action if appropriate (i.e., submission of an IN). **Thanks to this activity, the verification went from 10,000 news items per year verified manually to 120,000 in 2021 verified automatedly**. All this information was used to follow-up with the countries concerned in the event of any discrepancies observed with the official information reported to the OIE. The impact of this activity is seen primarily in an improved capacity of the OIE to be aware of any unofficial information related to OIE-listed diseases but also of other potential animal and public health threats.

The constant communication between the OIE and its Members improves reporting transparency and the timely submission of communications on exceptional epidemiological events. Six percent of all the INs submitted to the OIE in 2021 were due to the OIE's epidemic intelligence activity.

EFSA report on the ASF Genotype II epidemic in the affected Member States in the EU and two neighboring countries for the period from 1 September 2020 to 31 August 2021

Epidemiological analyses of African swine fever in the European Union - EFSA (European Food Safety Authority) Scientific report from 04 May 2022 | <https://doi.org/10.2903/j.efsa.2022.7290>

As ASF continues to spread across Europe causing significant economic losses, on the demand of the European Commission EFSA provided an updated analysis of the epidemiological data, focusing on the temporal and spatial distribution of ASF among wild boars and patterns of transmission and introduction of the virus in different types of domestic pig holdings in the affected MS (Belgium, Bulgaria, Estonia, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia) during the reporting period (from 1 September 2020 until 31 August 2021) and in two neighboring countries (Serbia and Russia). Particular attention was paid to the temporal and spatial patterns observed in Romania's domestic pig farms of different sizes.

Report highlights:

- **Temporal and spatial distribution of ASF.** The proportion of PCR-positive wild boar carcasses remained high, indicating the continuing spread of the disease, without a general increase in the proportion of seropositive samples in wild boar in the affected populations since the introduction of the disease. This suggests that, overall, there has been no increase in the wild boar survival rate. A clear seasonality in the proportions of PCR-positive samples from wild boar found dead with some differences between the different MS was observed: while this proportion (PCR-positive samples in wild boar) followed a decline in summer and an increase in winter in Romania and Slovakia; in Latvia and Estonia, there was a peak in the proportion of positive samples over the summer months. In domestic pigs, seasonality was observed during the spring/summer in Lithuania, Poland, Slovakia, and Romania (countries that submitted sample data from domestic pigs to EFSA), with a peak between May and September.
 - **Modeling of the potential risk factors for ASF occurrence in wild boar populations.** According to a systematic literature review, the most significant risk factors were related to habitat, socio-economic factors, and wild boar management. Thus, the presence of ASF cases in domestic pigs was identified as a significant factor in the probability of detecting ASF-positive PCR cases in wild boar in Romania and Slovakia. The presence of croplands, urban areas, and the density of water bodies and wild boar abundance were significantly related to the PCR-positive detection of ASF in wild boar. The number of hunting days was identified as a protective factor for ASF occurrence in wild boar in Romania. However, further investigation is needed.
 - **Assessment of the effectiveness of different control options in “white zones” under different scenarios with a stochastic model.** White zone (WZ) - a wild boar management zone that is set up as a belt at a distance from the newly ASF-affected area, in which, among other measures, the wild boar population is reduced drastically to an *a priori*-decided population density to stop the spread of the infection preventively. The model's outcomes clearly demonstrated that establishing a WZ is much more challenging when the incursion area is adjacent to a wide area with ASF spread and limited control efforts. Very stringent wild boar population reduction measures in the WZ are key to success. The WZ needs to be far enough away from the affected core area to reduce the population in time before the disease arrives. The timing of this will depend on the wild boar density and the required population reduction target in the white zone. **Finally, establishing a proactive white zone along the demarcation line of an affected area requires higher culling efforts. Still, it has a higher chance of success in stopping the spread of the disease than establishing reactive white zones after the disease has already entered the area.**
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Map 3. Location of the outbreaks reported throughout December. 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

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 - [ADIS disease overview](#)

AMERICA

The Dominican Republic

SITUACIÓN ACTUAL DE FIEBRE PORCINA AFRICANA - Informe Técnico - Semanas Epidemiológicas 30-21

EUROPE

Germany

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/107955/7/asf-europe-220526.pdf

https://ec.europa.eu/food/system/files/2022-05/reg-com_ahw_20220511_asf_deu.pdf

Italy

<https://www.pigprogress.net/health-nutrition/health/asf-italy-infected-wild-boar-found-in-outskirts-rome/#:~:text=A%20first%20case%20of%20African,outskirts%20of%20Italy's%20capital%20Rome.>

<https://www.ciatoscana.eu/home/peste-suina-cia-virus-dilaga-a-rieti-e-minaccia-centro-italia-piu-risorse-per-evitare-fase-3-emergenza/>

ASIA

Hong Kong

<https://hongkongbuzz.hk/2022/05/afcd-find-african-swine-fever-virus-in-wild-pig-in-sai-kung>

South Korea

<https://financialpost.com/pmn/business-pmn/african-swine-fever-case-found-on-pig-farm-in-s-korea>

Nepal

<https://theprint.in/world/nepal-reports-first-african-swine-fever-outbreak/963530/>

India

[Meeting to discuss present African swine fever situation at Lunglei in Mizoram \(thenewsmill.com\)](#)

Indonesia

<https://republika.co.id/berita/rav7vp368/7-ton-daging-babi-di-palu-terinfeksi-virus-demam-babi-afria>
[Foot-and-mouth disease detected in East Lombok livestock: govt - ANTARA News](#)

Vietnam

<https://baochinhphu.vn/viet-nam-la-nuoc-dau-tien-san-xuat-thuong-mai-vaccine-dich-ta-lon-chau-phi-102220601111503341.htm>

<https://www.nationalhogfarmer.com/news/vietnam-first-commercially-produce-african-swine-fever-vaccine>

The Philippines

<https://www.philstar.com/nation/2022/05/29/2184408/asf-outbreak-hits-5-zamboanga-barangays>

AFRICA

Ghana

<https://www.bbc.com/pidgin/tori-61561788>

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 the 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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