# 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.



# UNIVERSITY OF MINNESOTA



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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# Swine Disease Global Surveillance Report

Tuesday, April 4 to Monday, May 1, 2023

# **Report Highlights**

- **First ASF outbreak in a commercial farm in Greece**: This is the first report of an outbreak in domestic pigs since the previous case in a smallholder's premises in 2020.
- **UK and Hungary to lift regionalization restrictions**: Both countries have communicated their intention to lift current regionalization restrictions related to ASF.
- France joins the ASF vaccine race: ANSES's laboratory reports promising results of an ASF vaccine candidate.
- **Streptococcus suis outbreak in Bali:** At least 38 human cases of meningitis caused by *Streptococcus suis* were identified on the island.
- Withdrawal of FMD vaccine in Brazil: The government has banned the use of the vaccine in seven states.

### Surveillance at Points of Entry

- **Australia on alert:** Almost 40 tons of high-risk foods, including pork, beef, and other items from overseas, have been seized by Australian biosecurity officials at a Sydney warehouse.
- **Risk associated with movement of pork products within The Philippines:** P1.3 million (\$23,250) worth of pork and its related products from Cebu and Panay islands were confiscated at ports in northern Negros.
- **Singapore suspends pig imports**: Authorities have banned the import of live pigs from Indonesia following the detection of ASF in a shipment of live pigs.

R	Location	Date	Dx	Impact
1	Southwest region of the country, roughly 12 miles from the German border and 8 miles from the Czech Republic border, <b>Poland</b>	4/12	ASF	Smallholder farm - 16 pigs affected.
1	Sierres region, Greece	4/26	ASF	Commercial farm - further details unavailable.
1	Southern region, close to the Indian border, <b>Bhutan</b>	3/30	ASF	683 pigs affected
1	Pocheon, Gyeonggi Province <b>, South</b> <b>Korea</b>	4/4	ASF	Fourth outbreak in the city - over 9,400 pigs culled.
1	Southern (Guangxi province) and northwest region (Xinjiang province) regions, <b>China</b>	April	FMD Serotype O	Two new outbreaks reported over 200 animals affected.

# OUTBREAKS BRIEF

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 (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.





# African Swine Fever

### EUROPE

In April (04/06/2023 - 04/26/2023), four countries (Greece, Poland, Romania, and Serbia) reported 28 outbreaks in domestic pigs through the EU Animal Diseases Information System. The disease reappeared for the first time since 2020 in Greece, and the first outbreak this year was registered on a pig farm in Poland.

In the wild boar population, a total of 476 outbreaks were reported by 12 countries (Bulgaria, Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Serbia, and Slovakia). Poland (n=178) continues to be the country with the highest number of outbreaks of wild boar, followed by Italy (n=82) and Germany (n=67). Since the beginning of the year, 16 countries had reported a total of 3478 wild boar outbreaks as of April 21.

### **Regional highlights:**

• Greece | April 26: ASF reaches the second pig farm in the country. An ASF outbreak has been confirmed on a pig breeding farm in the Central Macedonian regional unit of Serres. In response, national and regional veterinary teams have been dispatched to the area to deal with the case in accordance with EU and national legislation. The deputy governor of the Agricultural Economy, Giorgos Kefalas, has communicated that the disease likely spread to the region through wild boars from neighboring Bulgaria, where several ASF cases have been recorded.

It's worth noting that the first ASF outbreak in domestic pigs was also recorded in the Serres area in February 2020. Still, it was detected in a small unit of domestic animals. This time, however, the virus has been confirmed in a unit with more intensive exploitation. This outbreak has not yet been reported to the World Organisation for Animal Health (WOAH) through official channels.

- Poland | April 12: The first outbreak on a backyard farm was reported this year. An outbreak of ASF occurred on a modest-sized farm that had 16 pigs, in the town of Lubań, situated in the Lower Silesia province. The town is located in the far southwest region of the country, roughly 20 km (12 miles) from the German border and 13 km (8 miles) from the Czech Republic border. This particular farm is the 16th case of ASF found in domestic pigs in the Lower Silesia province. This outbreak brings the total number of reported cases of AFS in domestic pig farms in Poland to 479 since the virus first entered the country a decade ago. Out of the 479 farms found to be infected, only 32 had over 1,000 pigs present. In contrast, 367 outbreaks happened on farms with fewer than 100 pigs on-site. Initially, the outbreaks were limited to eastern Poland, where there is a higher concentration of backyard farming compared to the west. However, since November 2019, the virus has also surfaced in western Poland, resulting in a "wave" of farm outbreaks in that region, with the current count at 55 locations.
- UK | April 20: Routine inspections reveal imported meat unsuitable for sale in the UK in retail outlets. During recent routine inspections conducted by local authorities, frozen, raw, and uncooked meat products were discovered in retail shops in the UK. These products were clearly labeled as suitable for sale only in their originating EU country. Subsequent investigations revealed that two importers had purchased these products and were linked to over 280 retail outlets in the UK.

The UK government included this incident as a case study in its draft Border Target Operating Model, which outlines a proposed model for border control for imported goods after Brexit. Authorities emphasized that despite the absence of a positive test for ASF, the presence of such products in the UK poses a significant and immediate threat to the country's pig industry.

The National Pig Association (NPA) expressed shock and concern about the government's admission of import control lapses but stated that they are not entirely surprised. According to NPA Chief Executive Lizzie Wilson, they have warned the government for years about the





dangers of inadequate checks on EU meat imports, which poses an unacceptable risk to the UK pork industry.

The UK government's case study suggested that if proper sanitary and phytosanitary controls had been in place, the products in question would not have been allowed to enter the UK as they would not have been certified for export by a veterinarian in the originating country. The government's draft Border Target Operating Model proposes a new approach to these controls, with implementation planned in three phases between the end of October 2023 and October 31, 2024.

• Germany | April 4: The designated four core areas formed after ASF broke out in wild boar in Brandenburg state, and restrictions on land use for agriculture and forestry will be lifted since no new outbreaks occurred in these zones. In particular, it is no longer necessary to search in the districts of Barnim, Märkisch-Oderland, Oder-Spree, Prignitz, and in the independent city of Frankfurt an der Oder for the fallen game before an area is farmed. Free-range and outdoor keeping of domestic pigs is possible again in the areas defined by the veterinary offices and with the district's approval, provided that the animal keepers fulfill the necessary biosecurity measures.

ASF entered Brandenburg state through western Poland via migrating wild boar; as a result, 11 core areas were formed. According to the Brandenburg state secretary for consumer protection, it has been possible to stop the spread of the disease towards the west and to push it back as far as the ASF protection corridor through the consistent implementation of the control measures such as extensive fencing, wild boar removals and fallen game searches in these districts.

In addition to Brandenburg state, the ASF virus has also spread to the north in Mecklenburg-Vorpommern state and to the south in Saxony state. Overall, ASF has only affected eight farms with domestic pigs in Germany, with four farms having fewer than 15 pigs present.

• Hungary | April 17: ASF restrictions reduced in several counties. The Hungarian authorities have requested the European Commission to lift the current risk regionalization scheme in several areas.

The authorities have recommended terminating the risk classification:

- o for five high-risk wildlife management units in Bács-Kiskun County and,
- o all seven high-risk wildlife management units in Csongrád-Csanád County.
- In addition, they have asked for a reduction in risk classification for six infected wildlife management units in Jász-Nagykun-Szolnok County and 14 in Békés County.

If this request is granted, producers and meat plants will be able to resume trading within the region with fewer limitations. This would be a significant step forward in the fight against the disease, proving that the efforts spent on defense yield meaningful results. The authorities believe that persisting with these measures is essential, and lifting restrictions would boost the local economy.

### **Regionalization agreements**

Hungary was the first of the EU countries affected by the disease to conclude a regionalization agreement with Japan for the distribution of pork products. The same agreement is underway with South Korea, and the Ukrainian market may soon become available. The experts of the authority are already waiting for the visit of the Ukrainian delegation.







Map 1. The distribution African swine fever outbreaks in Europe: April 6, 2023 - April 26, 2023 (Source: FAO <u>EMPRES-i</u>)

### ASIA

In April, seven countries (Bhutan, Nepal, The Philippines, South Korea, Vietnam, Indonesia, and Singapore (cases confirmed in imported pigs from Indonesia)) reported ASF outbreaks in domestic swine, and another two (Malaysia and South Korea) reported new cases in wild boars (Maps 2 and 3).

### **Regional highlights:**

- Bhutan | March 30: ASF returned to southern Bhutan after a brief hiatus. In the district of Sarpang, 83 pigs in a backyard herd tested positive for ASF. According to the report submitted to WOAH, four animals died at the premises near the border with India. Within a few days, a second outbreak was recorded in the same district at a farm with almost 600 pigs.
- India | April 5: Meghalaya's Dalu and Asiragre villages declared ASF epicenters. The decision was based on ASF-positive testing of pig tissue samples on March 30, 2023. As per the National Action Plan for control, containment, and eradication of African Swine Fever published by the Ministry of Fisheries, Animal Husbandry, and Dairying, the restrictions immediately apply to villages within a 1 km radius surrounding the infected premises, designated as the "Infected Zone." Moreover, restrictions apply to all villages falling within a 10 km radius surrounding the infected premises, designated as the "Surveillance Zone."

Meanwhile, the Tripura state government has banned importing pigs and piglets from outside the state as precautionary measures due to the sporadic ASF incidents in different parts of the country. Earlier in March, the Assam government had banned the entry of poultry and pigs to the state through the state's western border. Tripura and Meghalaya are the latest nine northeast states to detect the virus in the last weeks.







Map 2. African swine fever outbreak distribution in domestic pigs and wild boars in Asia as of April 13, 2023. (Source: FAO <u>EMPRES-i</u> - Data sources: Viet Nam: WAHIS & media information, Republic of Korea, the Philippines, Indonesia, Timor-Leste: WAHIS and government websites, Other: WAHIS)

• South Korea | April 4: The fourth ASF outbreak reported in Pocheon. A new outbreak has been confirmed on a pig farm in Pocheon, Gyeonggi Province, from the same owner as an earlier outbreak on March 19 and 29. According to officials, tests are being conducted at nine farms owned by this individual. Authorities have ordered the culling of approximately 9400 pigs at the affected farm in accordance with standard guidelines.

The government is addressing concerns about the spread of ASF in local farms by strengthening control measures. These measures include:

- Increasing the frequency of inspections in pig farms located in the western and northern parts of the country, including border counties such as Cheorwon, Goseng, and Yeoncheon. The ministry plans to conduct about 200,000 regular checks, compared to 144,000 completed last year.
- Establishing a task force to oversee the implementation of quarantine measures by domestic farms.
- Intensifying efforts to search for and isolate affected animals, including hunting wild boars.
- Adding more checkpoints for vehicle disinfection near the inter-Korean border areas and fumigation trucks will be deployed to roads with high traffic.

So far this year, seven outbreaks of ASF have been detected on pig farms in the country. To combat its spread, the government is addressing factors such as the significant increase in the wild boar population, intensified farming during springtime, and higher foot traffic in the mountains.

• The Philippines | April 13: Veterinary authorities intercepted and shipped back to Cebu 9.52 kilos of pork and 37,680 packs of processed food, with a total market value of P1.2





**million (\$ 23,250) at ports in northern Negros.** Moreover, the confiscation and destruction of P100,246 (\$1,793) worth of pork and processed foods, including lechon from Iloilo, took place at the BREDCO Port in Bacolod City.

Negros Occidental and Negros Oriental, along with 18 other provinces across the country, currently remain free from ASF. In order to maintain their ASF-free status, Negros Occidental and the highly urbanized Bacolod City have imposed permanent bans on the entry of live pigs, boar semen, sows, piglets, and pork-related products from Cebu, Panay, and Guimaras islands. This ban was implemented after the confirmation of ASF in those areas.

**Escalating tension between Central and Local Government** 

Due to the detection of ASF in several areas of Cebu province, the Danao City Government has prohibited the entry of live pigs, boar semen, and pork-related products. This order came after Cebu Governor Gwendolyn Garcia lifted all controls on the movement of hogs across the province, despite the spread of ASF in 12 areas. Governor Garcia had made her own policy on dealing with ASF after questioning the Department of Agriculture's testing method and clashing with their policy to cull all hogs within a 500-meter radius of infected areas. Some of the measures that Governor Garcia lifted include:

- The color-coding scheme prescribed by the DA under the National Zoning and Movement Plan for the Prevention and Control of ASF, which provides the rules for the movement of swine products across different colored zones.
- The quarantine checkpoints that were set up to monitor the movement of hogs.
- The ban on transporting hogs from infected areas to other parts of the province.
- The mandatory culling of all hogs within a 500-meter radius of infected areas.

Due to further ASF spread in the Philippines, authorities have been modifying their disease control strategies. The devastating pig disease is still rampant in the Philippines and continues to affect the pig population. It has spread to 21 provinces, 54 towns, and 137 rural communities since its first introduction in 2019. The updated control strategy will place more emphasis on surveillance and closer collaboration with local governments. This measure involves the deployment of a mobile caravan that will focus on educating the general population on how to prevent the spread of ASF in the country. The campaign will initially begin in the Metro Manila area. In the Western Visayas region, specifically in Iloilo, authorities are encouraging hog owners to refrain from feeding their animals swill and food scraps, as well as focus on biosecurity: securing each premise, maintaining disinfectant footbaths, and limiting contact with the pigs to one person, who only enters the pen with clean clothes and footwear. For better ASF control, one company executive has called for the introduction of ASF testing for all imported meat, which is not currently carried out at the port of entry.

• Singapore | April 21: The Singapore Food Agency (SFA) has suspended the import of live pigs from Indonesia following the detection of ASF in a shipment. The SFA announced that a shipment of live pigs from Indonesia's Pulau Bulan to Singapore tested positive for ASF. The virus was detected in pig carcasses in a Jurong abattoir where the animals were slaughtered for consumption. According to the agency, this is the first time ASF has been identified in imported pigs in Singapore. In response, the SFA has suspended the import of live pigs from Pulau Bulan, which contributes around 15% of Singapore's total pork supply and about two-thirds of the country's supply of freshly slaughtered pork.







Map 3. African swine fever outbreaks in domestic pigs in Asia from April 1, 2023 to May 5, 2023 (Source: FAO <u>EMPRES-i</u>)

### OCEANIA

Australia | April 4: Australian biosecurity officials seized almost 40 tons of high-risk foods in a Sydney warehouse in late February. The biosecurity risk material included turtle, frog, pork, beef, prawns, and other items, indicating one of the largest ever biosecurity hauls in Australian history. According to Senator Watt, the specific origin of the seized shipment was not disclosed. However, he did mention that the shipment was part of a larger consignment of goods weighing 250 tonnes. Meats recovered by biosecurity officials have not been tested for disease and pests yet. Individuals and companies that breach Australia's biosecurity laws can face significant fines. As per the Biosecurity Act 2015, fines for non-compliance can be as high as \$1,375,000 for individuals and up to \$6,875,000 for companies. In addition to fines, violators may also face legal action (up to 10 years in jail) and have their goods confiscated or destroyed.





# **Research Focus**

## Promising results of another ASF vaccine reported by ANSES's laboratory

France | March 31: The Pig Virology and Immunology Unit of ANSES (Ploufragan-Plouzané-Niort), the National Reference Laboratory for ASF, detected an attenuated variant of the Georgia 2007/1 viral strain currently circulating in the European Union while performing inactivation assays with the wild strain. In experimental trials, this attenuated strain caused only slight fever in infected animals, while the Georgia strain is normally fatal in 100% of cases. Further studies confirmed that most pigs inoculated with this virus showed only mild symptoms and were able to develop an immune response that enabled them to resist ASF virus infection within two weeks of vaccination. ANSES scientists persisted with their work on the attenuated strain to enable its mass production, which was successful using in vitro-produced cell lines. The vaccine created through this method caused fewer symptoms compared to the original attenuated strain and retained its effectiveness. Ongoing studies aim to verify that the attenuated strain cannot be transmitted between animals or regain its virulence and to evaluate the vaccine's efficacy in preventing vaccinated animals from transmitting the pathogenic ASF virus. This vaccine presents the advantage that it is not genetically modified, making it more feasible to obtain authorization for its use in natural settings. The vaccine is expected to initially target the wild boar population in Western Europe, which is the species most heavily affected by ASF and poses a significant risk to pig farming if left unchecked.

## Foot-and-mouth disease

In April, new FMD outbreaks were reported in China. Meanwhile, in Libya, Iraq, and Turkey, there are ongoing outbreaks that started earlier in the year and have been reported in our previous monthly reports. In Indonesia, national authorities reported two FMD outbreaks in April. However, information about the affected species was not provided.

### AMERICA

**Brazil | April 6: Brazil bans FMD vaccination in seven states.** According to <u>several international</u> <u>news outlets</u>, Brazil's agriculture ministry has prohibited the storage, sale, and use of FMD vaccines in seven states in order to ensure the country's FMD-free status and expand disease-free zones without vaccination by 2026. These seven states are Espirito Santo, Goias, Minas Gerais, Mato Grosso, Mato Grosso do Sul, and Tocantins, in addition to the federal district. These states are no longer required to vaccinate their cattle and buffalo, which total approximately 113 million head, or nearly half of all livestock in Brazil. According to the ministry, the suspension of vaccination will help farmers save money and encourage them to invest in keeping Brazil FMD-free.

Brazil was declared FMD-free with vaccination by the World Organization for Animal Health (WOAH) in 2018. Since 2007, the southern state of Santa Catarina has been FMD-free without vaccination.

### **ASIA**

**China | March 23 - April 11: New FMD cases confirmed in Buffaloes and Cattle.** Two FMD outbreaks have been reported, one in southern China, in the autonomous region of Guangxi, which borders Vietnam, and a second outbreak in northwest China, in the autonomous territory of Xinjiang Uygur. This vast mountainous region borders Afghanistan, Mongolia, Kashmir, Kyrgyzstan, Kazakhstan, Tibet, Tajikistan, and Russia.

<u>In Guangxi</u>, a case of FMD in domestic buffaloes was observed on March 23 at an Animal Health Inspection and disinfection station in Daxin, Chongzuo. All 79 susceptible animals were killed and





disposed of. This outbreak was attributed to the illegal movement of animals. <u>In Xinjiang</u>, 6 cases in cattle were observed on April 11 at an Animal Health Inspection and disinfection station in Kuqa, Aksu. All 12 susceptible cattle were killed and disposed of. The source of this outbreak is unknown, although the cases occurred in animals that were being moved legally.

Both outbreaks were confirmed by reverse transcription polymerase chain reaction (rt-PCR), and the responsible FMDV serotype was confirmed as Serotype O.

Iraq | April 11: Six new outbreaks of FMD reported. According to the latest follow-up report to

<u>WOAH</u>, six new outbreaks occurred during the months of March and April, bringing the total number of ongoing outbreaks to 36. The new outbreaks occurred in the administrative divisions of Al-Qadisiyah, Ninawa, At-Ta'mim, Diyala, Al-Basrah, and Baghdad. These new outbreaks were responsible for 50 new cases, although no new deaths have been recorded. Since the first FMD outbreaks in January, 27,982 and 231 deaths of livestock have been reported.

**Indonesia | April 12: New FMD outbreaks reported while the country declares FMD endemic**. National authorities reported two FMD outbreaks via the FAO's EMPRESi. The reported outbreaks occurred in <u>Sulawesi</u> Barat, where eight cases were reported, and in <u>Banten</u>, where 14 cases were reported. For both outbreaks, there is still no detailed epidemiological information provided, and the species of domestic animals affected have not been disclosed.

### Training to boost biosecurity in Indonesia and Timor-Leste

Australia is investing \$770,000 in a biosecurity training program in Indonesia and Timor-Leste to protect farmers from exotic diseases such as foot-and-mouth disease (FMD) and lumpy skin disease (LSD). The funding will be used to develop country-specific "train the trainer" programs to assist in the detection and management of these diseases, such as import risk analysis, border clearance processes, on-site management, and disinfection treatments. From April 2023, the program will be run by Charles Sturt University through Australia's Biosecurity Training Centre. Both Indonesian and Timorese officers will be trained in "train the trainer" techniques so that they can mentor their colleagues. The initiative is part of the Australian government's \$14 million package to invest in regional biosecurity.

# **Streptococcus Suis Meningitis**

An outbreak of meningitis caused by *Streptococcus suis* was reported in Bali. According to the Provincial Health Service of Bali, at least 38 human cases of meningitis were identified on the island. The epidemiological analysis is still ongoing, and not all cases in Bali have been identified as strains of *Streptococcus Suis* Meningitis. A coordination team is being organized by Bali Health Authorities to identify infectious cases, establish diagnostic procedures, limit the spread of the disease, and facilitate treatment.

### **Regional concern**

In March, Hanoi's Center for Disease Control announced the detection of its first human case of *Streptococcus suis* in Vietnam. The patient is a 52-year-old resident of the Ha Dong district and is the owner of a restaurant that sells blood pudding.





## An emerging Zoonosis

*Streptococcus suis* is a gram-positive bacterial strain considered an emerging zoonotic pathogen capable of transmission from pigs to humans. Infection is acquired through exposure to contaminated pigs or pig meat. The most common clinical manifestations of *Streptococcus suis* infection in humans are meningitis, sepsis, endocarditis, and arthritis. Contagion among humans occurs through the handling of infected meat carcasses or the consumption of undercooked pork products. There is limited evidence to suggest that human-to-human transmission of the infection occurs. Most cases are reported in Southeast Asia due to a high density of pig population.

The pathogen is not only found in pigs but can also be isolated from other animals such as ruminants, cats, dogs, deer, and horses. It is believed to be a commensal in the intestinal flora. Healthy pigs may carry multiple serotypes of *Streptococcus suis* in nasal cavities, tonsils, and upper respiratory, genital, and alimentary tracts. Although there are 35 known serotypes, only a limited number, specifically serotypes 1-9 and 14, cause infections in pigs. Serotype 2 is known to be the most pathogenic for both pigs and humans. The transmission usually occurs through nasal or oral routes, and it colonizes the palatine tonsils of both clinically ill and healthy pigs. Infant piglets can contract the infection after contact with colonized sows. Rates of asymptomatic carriage can be as high as 80%, and while the morbidity rate ranges from less than 1% to more than 50%, it rarely exceeds 5%.

### **References:**

Recurrent reports reviewed WOAH - WAHIS interface - Immediate notifications WOAH - WOAH Asia Regional office FAO - ASF situation update in Asia & Pacific DEFRA - Animal conditions international monitoring reports CAHSS - CEZD Weekly Intelligence Report European commission - ADIS disease overview

### EUROPE

France French lab reports progress on African swine fever vaccine Germany ASF Germany: Another 4 core areas disappear Poland ASF Poland: 1st farm in 2023 falls victim to virus Hungary **Swine Fever Restrictions Reduced Across** Country UK Imported meat unsuitable for sale in UK found in some stores Pig sector 'alarmed' by government admission on import control lapses Greece African swine fever detected in Serres ASF: Domestic pig farm 'hit' - Where found Measures to prevent the spread of African swine fever

FMD in China Guangxi

FMD in Xinjiang New outbreaks of FMD in Iraq Indonesia FMD outbreaks Brazil bans FMD vaccination in seven states Boost to biosecurity in Indonesia

### OCEANIA

Australia Turtle, raw prawns and poultry meat found in 'one of the largest ever biosecurity hauls in Australian history'

### ASIA

India <u>Govt declares Dalu and Asiragre village as</u> <u>epicenters of African swine fever</u> <u>Tripura Govt Bans Import of Pigs Amid</u> <u>Rising Swine Flu Cases</u> The Philippines <u>P1.3M worth of pork from ASF areas seized</u> <u>Amid ASF, NegOcc returns P1.2M pork</u> <u>products to Cebu</u> <u>Philippines revises approach to ASF</u> <u>control</u>





African Swine Fever Case Reported in Pocheon S. Korea beefs up containment measures against African swine fever

 Philippines revises approach to ASF

 control

 Meningitis Outbreak in Bali

 Streptococcus suis: An Emerging Human

 Pathogen

 Singapore

 Singapore stops import of live pigs from

 Indonesian island after African swine fever

 detected in shipment

 South Korea

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