

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 systematic 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, July 5, 2022 – Monday, August 1, 2022

Report Highlights

- **The UK:** Following the new long-distance jumps of ASF across Europe, the UK has raised concern and increased ASF risk status of introducing the virus through a human-mediated route from medium to high.
- **The DR:** Since January, more than 4,000 kilos of pork have been seized at Las Americas International Airport.
- **FMD in Indonesia:** Regional concern due to the fast spread of the disease in the archipelago.
- **Australia on high alert:** Increased vigilance as FMD viral fragments are detected in meat products.

OUTBREAKS BRIEF

R	Location	Date	Dx	Impact
2	Emsland, Lower Saxony, Germany	7/2	ASF	286 pigs and 1,500 piglets slaughtered.
2	Uckermark district in Brandenburg state, Germany	7/4	ASF	This is the 4th outbreak of domestic pigs in this German state; 1300 pigs are affected.
2	Several regions, Indonesia		FMD	As of July 26, 6,275 animals have been slaughtered, and 3,872 have died.
2	Melbourne and Adelaide, Australia	7/21	FMD	Fragments of FMD virus were detected in products seized at the Adelaide airport and in pork products for sale in Melbourne.
1	Kurzemes municipalities (western region of the country), Latvia	7/8	ASF	First outbreak in domestic pigs reported in the country - 1460 pigs affected.
1	Central district of Strasenii, Moldova	July	ASF	First outbreak in the region, involving a small backyard farm - 39 pigs affected.

1	Camiguin province, Northern Mindanao, The Philippines	July	ASF	Five villages already affected - 900 hogs were culled to stop the spread.
1	Bihar state (which borders Nepal), India	7/17	ASF	First report of an outbreak in the state. Over 1000 pigs affected.

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. A map with the location of the events reported is available at the end of this report.

African Swine Fever

EUROPE

In July (06/30/2022 - 07/27/2022), the list of countries that reported ASF in domestic pigs was updated with Germany, Serbia, Latvia, Lithuania, Slovakia, and Russia, which, together with Moldova, Romania, Poland, and Ukraine, brought the total number of outbreaks to 73 in 10 countries, which is three times more than in the previous month (n=23).

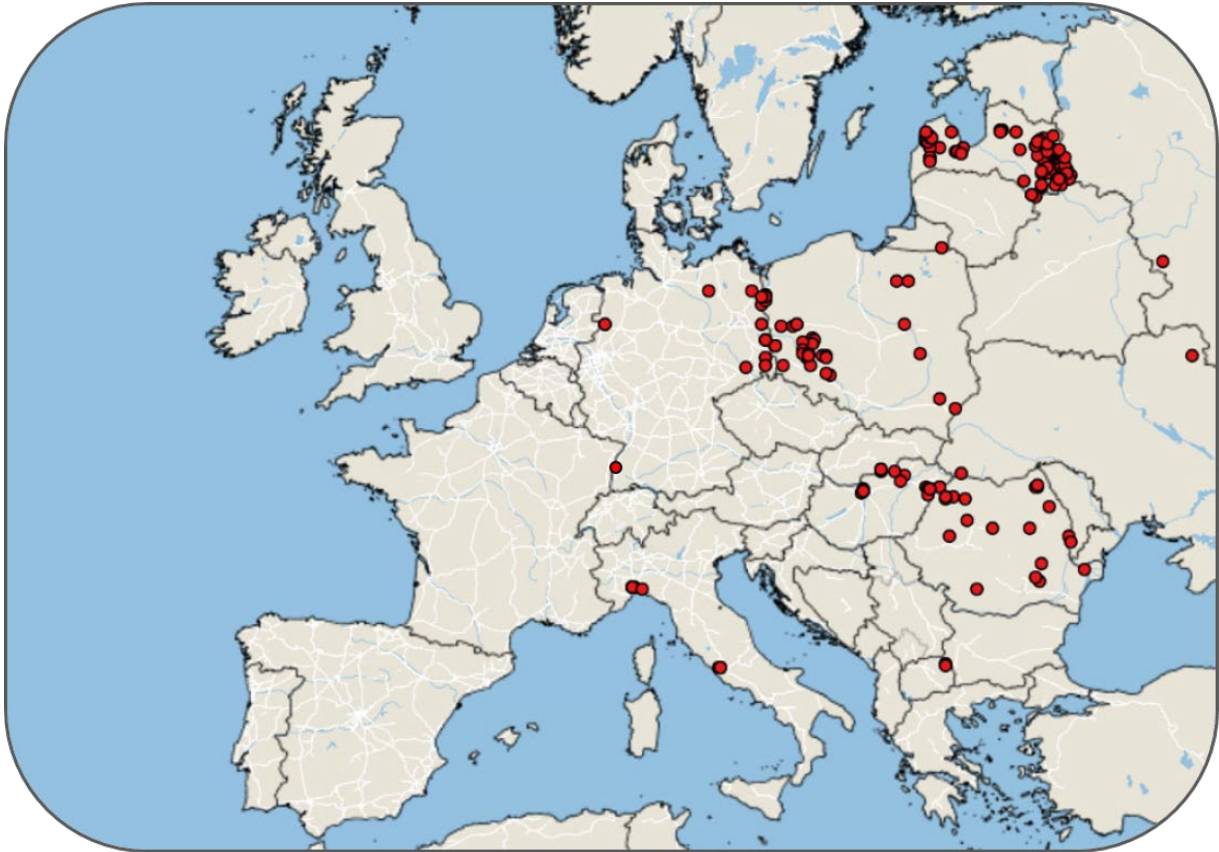
ASF spreads around Europe, affecting commercial pig farms in Latvia (1460 pigs), Romania (1738 pigs), Germany (1786 pigs), and Russia (2749 pigs). First outbreaks in domestic pigs this year were registered in Latvia and Lithuania, while Italy has not reported further outbreaks on pig farms in July.

The number of outbreaks in wild boars also increased. Thus, according to the latest reports (European Commission Animal Disease Information System (ADIS), OIE-WAHIS, EMPRES-i FAO) in July, 12 countries (Estonia, Germany, Hungary, Italy, Latvia, Lithuania, North Macedonia, Poland, Romania, Serbia, Slovakia, and Russia) reported 488 new outbreaks in wild boars, which is 1.2 times more compared to the previous month (n=397). Estonia and Serbia were added to the list of reporting countries in July.

According to the European Commission Animal Disease Information System (ADIS), since the beginning of the year, the total number of ASF outbreaks in wild boars has reached 4630 across 14 European countries (as of July 22), which is almost two times less than at the same period of last year (n=8148 in 12 countries). Meanwhile, 262 outbreaks were registered in domestic pigs in 12 European countries - almost three times less than the previous year (n= 726 in eight countries).

Regional Highlights:

- **Romania | July 15:** ASF outbreak on a farm with 1,738 pigs in western Romania during the first week of July. More than 110 animals died, and the rest have been destroyed to reduce the risk of further spread. In central Romania, ASF was confirmed in two backyard farms.
- **Latvia | July 8:** First ASF outbreak in domestic pigs was reported in Kurzemes municipality in western Latvia on a farm with 1,460 pigs. Within a week, two more outbreaks were confirmed in the small backyard herds in the same municipality. This brings Latvia to a total of three ASF outbreaks in domestic pigs this year.
- **Moldova | July:** The first ASF outbreak in the central district of Straseni affected a small backyard farm with 39 pigs. One more outbreak was reported within a few days in Cahul - the southwestern district that borders Romania, where the disease has not been registered for 19 months.
- **UK | July 5:** Following ASF spreading west across Europe, the UK raises concern and increased ASF risk status of introducing the virus through a human-mediated route from medium to high. So far in Germany, cases have been confirmed in Brandenburg (wild boar and domestic pigs), Saxony (wild boar), Mecklenburg-Western Pomerania (wild boar and domestic pig), Baden-Württemberg (domestic pig), and in Lower Saxony (domestic pig), hundreds of kilometers apart and in close proximity to French and Dutch borders. As stated in the [DEFRA](#) report, such a significant “jump” could be caused by human movement with infected produce or equipment, which was observed in Belgium (2018) and Italy (2022). Pig producers support the UK government's decision; however, they call for more actions, in particular, to improve border measures on meat products entering the country, as some retailers import meat from ASF-free regions of Germany and other countries that have the disease. Considering these facts, DEFRA defines the overall risk of entry of ASF virus into the UK from all combined pathways as medium; however, human-mediated routes of introduction as high.



Map 1. ASF outbreaks reported in Europe during July (Source: FAO [EMPRES-i](#))

AMERICA The Dominican Republic

In six months, more than 4,000 kilos of pork seized at Las Americas International Airport

DR | July 15: The Animal Health Directorate of the Ministry of Agriculture Customs authorities released that from January to June of this year, customs officers seized 91,685 kilograms of the so-called “international garbage,” at the Las Américas International Airport.

This includes 4,583 kilos of pork and sausages discovered during the inspection of personal luggage of both passengers entering and leaving the country.

According to the [local newsletter](#), a significant percentage of the seized products were to be transported in luggage by passengers who had the United States as their final destination.

After retaining the “international garbage,” inspectors deposit it in special tanks to be incinerated in a furnace of the organization that operates within the perimeter of the Las Américas airport.

Recently, the United States embassy in the country recommended to travelers that when departing from the Dominican Republic to the US, refrain from carrying pork or products derived from it to prevent the spread of ASF.

ASIA

In July, five countries - India, The Philippines, Nepal, and Vietnam - reported ASF outbreaks in domestic swine, and South Korea reported cases in wild boar



Map 2. African swine fever outbreaks in Asia June-July 2022 (Source: [FAO EMPRESi](#))

Regional highlights

- India | July 17:** For the first time since the disease's introduction into India in 2020, [ASF has been confirmed in Bihar state](#), which borders Nepal to the north. [Local news sources](#) reported that three districts in the state, East Champaran, Nalanda, and Saran, have so far reported cases, with over 1000 documented swine deaths. The state administration has alerted all 38 districts, advising them to monitor potential outbreaks and cull pigs in the affected localities.
- The Philippines | July:** Authorities reported two new ASF outbreaks in [Camiguin province](#) (Northern Mindanao) and [Koronadal city](#) (Region XII). After [14 pigs died on June 22](#) in Camiguin, the provincial veterinary office confirmed that the ASF infections were traced to Barangay Pandan in the province's capital city of Mambajao. Despite efforts to restrict the outbreak, ASF has spread to five villages in Camiguin. The second ASF outbreak was reported in Koronadal on July 10, 2022, and 900 hogs were slaughtered in two barangays to stop the spread of African swine disease (ASF). According to [news reports](#), at least 850 culled pigs were from a commercial hog farm, while 33 were from backyard farms in Namnama and Rotonda administrative units.
- Vietnam | June 29 to July 20:** National authorities reported [ASF outbreaks](#) in domestic swine in the following provinces in northern and central Vietnam: Kon Tum on June 29, 2022; Thai Binh on July 07, 2022; Ninh Binh on July 12, 2022; Ha Tinh on July 13, 2022; Cao Bang and Lao Caion on July 14, 2022; and Bac Kan on July 20, 2022. However, the epidemiological details of these outbreaks have not yet been provided.
- Nepal | July 21:** Reported an ASF outbreak in the central-southern part of the country, in Bharatpur municipality-6 of Chitwan district. According to an outbreak report submitted to [FAO EMPRESi](#), this outbreak involved 212 cases, 209 deaths, and 800 pigs were considered at risk.
- South Korea | July 04 to July 21:** Thirteen new cases of ASF were confirmed in wild boars, bringing the cumulative number of positive wild boars to 2648 since the first incursion of ASF

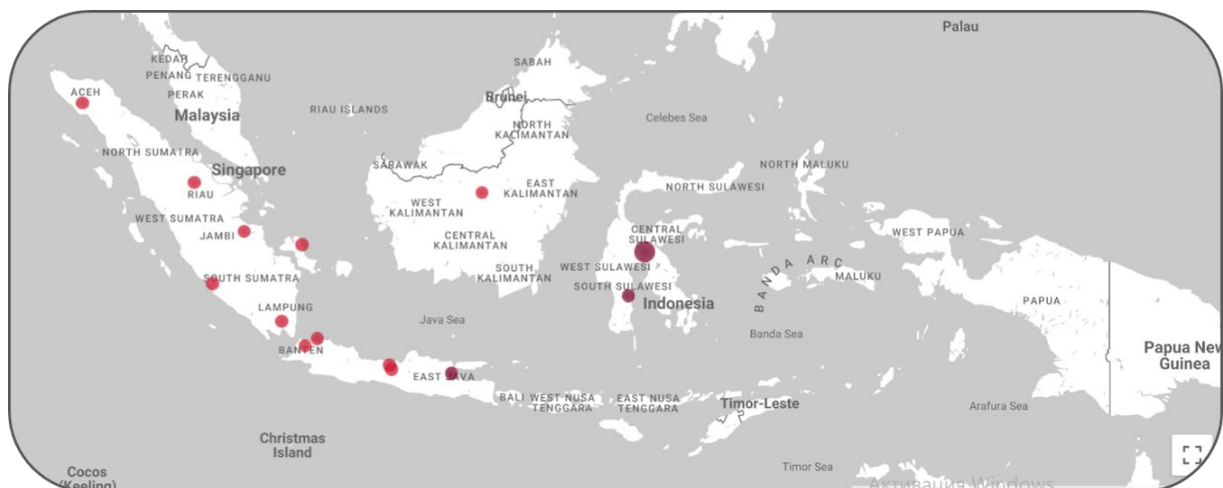
into South Korea on September 17, 2019. A summary of ASF outbreaks in South Korea can be found here: Pigpeople.net

Foot-and-Mouth Disease (FMD)

ASIA

FMD outbreaks raise concern in South East Asia and Australia

For approximately 150 years, FMD has been endemic in continental south-east Asia (Cambodia, Lao PDR, Malaysia, Myanmar, Thailand, and Vietnam). However, several island countries and states (Brunei Darussalam, Indonesia, Philippines, and Singapore) have remained FMD-free without vaccination till recent months. FMD outbreaks in Indonesia, which was considered FMD-free without vaccination since 1986, raised significant concern among all stakeholders, especially Australian authorities, who estimated the direct economic impact of the potential entry of the disease into their territory in around \$80 billion to the livestock and meat processing sector over a decade once the virus enters and spreads around the country. Other countries, such as Timor-Leste and Papua New Guinea, Australia, are also free from the disease.



Map 3. Current distribution of FMD outbreaks in Indonesia (Source: [HealthMap](#))

Background story of one country: Indonesia

- **1887** - the first FMD outbreak in East Java was reported. FMD became endemic and spread throughout Java and other islands, including Sumatra (1892), Kalimantan (1906), Sulawesi (1902), and Madura (1906, 1913), West Nusa Tenggara (1911), and Bali (1962) (Map 3).
- **1973** - Almost a century later, the serotype was identified as O by the World Reference Laboratory for FMD (WRLFMD) in Pirbright.
- **1975** - The National Authorities, with the support of regional partners, started the implementation of the FMD control program:
 - **Key elements of the measures taken:**
 - In the disease-free zone (East and West Nusa Tenggara, Irian Jaya (now Western New Guinea or Papua), Moluccas, Timor Leste): strict animal movement and quarantine were implemented

- In the suspected zone (Kalimantan, Sumatra, Sulawesi): routine surveillance was conducted
- In the infected zone (Java, Bali, South Sulawesi): a mass vaccination program was carried out. The “crash” vaccination method was used to prevent the reappearance of the disease in the infected areas. The “low-speed” vaccination was carried out gradually but in an intensive manner in the non-infected areas with a potential for the disease to spill over. The vaccination program was implemented in order to cover 80% of the livestock population at the age of three months and older. Vaccination of pigs took place only in infected herds; sheep and goats were vaccinated voluntarily as potential disease carriers. Ear markings were used to identify vaccinated animals, and strict control over livestock vehicles to minimize animal movement into the vaccination area was implemented.
- FMD eradication was conducted using international vaccines until 1981 when domestic production was initiated. With assistance from the Australian Government, a local vaccine production facility was built in the Center for Veterinary Biologics (Pusvetma).

The stamping out policy was not carried out due to economic, cultural, and political reasons. Slaughter-out was not feasible due to the role of livestock as a major economic asset of smallholder farmers.

As a result of the eradication program, many regions were declared free of FMD. According to the National Livestock Census Survey, DGLS (1980), the estimated cattle population was almost 9 million, 2.3 million water buffalo, 3.6 million pigs, and over 15.5 million goats. In 1975, the cost of FMD was estimated at US \$10 million per year. In 1974, Australian International Development Assistance Bureau (AIDAB) provided funds for FMD vaccines, vehicles, and vaccinating equipment, as well as the services of consultants and advisers for field control of the disease to support the eradication program.

- **1983** - An outbreak of FMD serotype O on the border between Central and East Java islands spread over the island infecting 13,976 animals.
- **1985** - The last cases of FMD occurred in December 1983, and the final vaccinations were conducted in Java in 1985
- **1986** - The state declared FMD-free
- **1990** - The FMD-free status is recognized internationally by WOA (funded as OIE).

After 30 years of calm, the first outbreak was detected in early May

- **April 28 - May 3** - FMD outbreaks were identified in cattle in the northern and western suburbs of Surabaya, East Java, the second-largest city in Indonesia. The disease has likely been circulating on the island since mid-April because the first cases of the disease were misdiagnosed. The diagnosis was reported to the WOA on May 9, and the FMD viral strain was confirmed to be serotype O (O/ME-SA/Ind-2001e lineage).
- **May 11** - The disease has affected cattle in four districts of the East Java province (Java) and two districts in Aceh province (Sumatra). So far, 79 outbreaks in East Java and one in Aceh were reported to WOA. **The distance between the two affected regions is approximately 2,100km (1,300 miles).** While the WOA immediate notification reports around 3,500 affected animals, data from the Indonesian Ministry states that over 2,200 animals have been affected

in Aceh, with one death as of May 11, 2022, and 3,200 animals have been affected in East Java with a 1.5% death rate.

- **Later, in May** - outbreaks affecting cattle, buffalos, sheep, and goats were reported in many provinces of the country at significant distances from each other. The virus quickly spread over the islands, affecting thousands of susceptible animals in South and North Sumatra, Jakarta, East, Central and West Java, South Central and West Kalimantan, and spilled over to other islands - the Bangka-Belitung Islands and the western portion of the Lesser Sunda Islands.
- **July 1** - The Ministry of Agriculture [announced](#) that FMD had been detected in 233,370 head of livestock spread across 246 districts and cities in 22 provinces. According to [FMD Handling Task Force data](#), 312,053 animals remained sick, 73,117 recovered, 3,839 were conditionally slaughtered, and 1,726 died.
- **July 4** - The disease reached Bali - the most popular island vacation destination in the Indonesian archipelago. Bali's Agricultural and Food Security Agency announced that it had eliminated 55 out of 63 cows that had tested positive for FMD and had been investigating the cause behind the FMD outbreak reaching the island.
- **July 9** - While the vaccination program was starting slowly, the Qurban or Eid al-Adha religious festival from July 9-12 resulted in large movements of animals around the country, which is also considered likely to have promoted the further spread of the diseases.
- As of **July 22**, a total of **66,898 confirmed** (64,919 in cattle, 1,203 in buffaloes, 228 in goats, 532 in sheep, and 16 in swine) and **70,265 susceptible** (70,013 in cattle, 251 in buffaloes, and 1 in goats) cases were reported to the WOAHA WAHIS (Map 4).
- As of **July 26**, 6,275 animals have been slaughtered, and 3,872 have died.

As mentioned by the [FMD Handling Task Force's team of experts](#), 263 districts and cities in 22 Indonesian provinces have been affected by the disease as of July 18. Thus, all provinces on Java island and some in Sumatra are classified as red zones. Less than 50% of the FMD-affected districts and cities, such as Lampung, West Kalimantan, and South Sulawesi, are classified in the Yellow Zone. Only a limited number of provinces, such as Papua, East Nusa Tenggara, and Maluku, are considered in the Green Zone.

Indonesia's current population of susceptible animals (cattle, sheep, goats, pigs, and buffalo) is estimated at 65 million, as mentioned during a Northern Territory Government webinar (July 19).

Measures taken. [As mentioned in the Emergency Plan of Action Indonesia: FMD outbreak](#), at the national level, the Government of Indonesia has undertaken several preventive measures to reduce the spread of FMD disease. Among those, a vaccination campaign started in mid-June. The government has been distributing the imported FMD vaccines in two stages.

- In the first stage, the government disbursed 800,000 doses of the vaccine. **As of July 26,, 663,919 livestock have been vaccinated.** Meanwhile, the government has disbursed 2.2 million doses of the FMD vaccine in the second distribution phase - which is still ongoing.

Current Hypothesis of Introduction Pathway

The source of the recent outbreak is suspected to be illegal imports of live animals. The large movement of people and animals during the Lebaran holiday period contributed to the rapid spread of the disease.



Map 4. Location of the five regions with the highest count of current FMD cases in Indonesia

Australia

Increased vigilance as FMD viral fragments are detected in meat products

The discovery of FMD virus fragments at [Adelaide airport](#) and [Melbourne](#) supermarkets has triggered increased concern in the country, with politicians calling for the closure of borders to stop the potential introduction of the disease. According to the Agriculture Minister, FMD viral nucleic acid fragments were found in pork products that had just arrived in Australia at Adelaide airport from China and Indonesia on July 20, 2022. Within the same week, viral fragments of FMD virus and ASF virus were also detected in pork products in supermarkets and a warehouse in the city of Melbourne. These pork products were also reported to be from China. Australia is currently under high alert for the possibility of FMD introduction into the country and has heightened biosecurity measures at border entry points. There is increased scrutiny and thorough searching of mail from Indonesia and China for animal products that might carry the FMD virus and the use of citric acid-soaked foot sanitation mats to disinfect all shoes at border entry points.

Swine Influenza

ASIA

India

H1N1 variant - rise in cases

India is experiencing an increase in influenza A viruses of swine cases across the country. With the increasing number of cases, H1N1v influenza is second only to COVID in the positivity rate in one of the most populated cities - Pune.

According to the Integrated Disease Surveillance Programme [report](#), over 424 cases of H1N1v with more than a dozen deaths have been reported across 19 out of 36 states and union territories of India, compared to 778 cases and 12 deaths overall in 2021. The number of new cases has been increasing since June, predominantly in highly-populated cities, including Mumbai, Pune, and Jaipur. Thus, in July 2021, 21 cases were reported in Mumbai, making a total of 64 in the year.

In India, the influenza season is quite variable. The rise in cases in the northern region usually happens during winter, and in the southern part of the country, it happens during the monsoon.

Editor's note: We cite articles using the information that they contain. Influenza A viruses that normally circulate among swine are called variant viruses if they infect humans. WHO/OIE/FAO standardization announcement from 2014 - [LINK](#)

Fact box: Influenza A viruses of swine

Swine influenza is a respiratory disease of pigs caused by type A influenza viruses that regularly cause outbreaks of influenza in pigs. Influenza viruses that commonly circulate in swine are called "swine influenza viruses" or "swine flu viruses." Like human influenza viruses, there are different subtypes and strains of swine influenza viruses.

Influenza A viruses of swine do not normally infect humans. However, sporadic human infections with influenza viruses that normally circulate in swine and not people have occurred. When this happens, these viruses are called "**variant viruses**." They also can be denoted by adding the letter "v" to the end of the virus subtype designation.

In recent years, the main Influenza A viruses of swine circulating in U.S. pigs are: swine triple reassortant (tr) H1N1, trH3N2, and trH1N2. With the exception of the 2009 H1N1 virus, influenza viruses that circulate in swine are very different from influenza viruses that commonly circulate in people.

For more information regarding human infections with variant viruses -- [LINK](#)

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AMERICA

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India

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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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