

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, May 4, 2021 – Tuesday, June 1, 2021

Report Highlights

- **Vietnam puts hold on pork imports from Thailand:** decision comes after detection of African swine fever (ASF) in batch of 980 live pigs imported from Thailand on May 19.
- **EFSA report:** The European Food Safety Authority released a scientific opinion on the ability of different products to transmit ASF.
- **Detection of influenza variants in Canada:** two Influenza A variants (H1N2 and H1N1, respectively) have been detected in two unrelated human cases in Manitoba.

MAY OUTBREAKS BRIEF

R	Location	Date	Disease	Impact
1	Mizoram (close to the border with Bangladesh), India	5/29	ASF	4,650 pigs in 2 months (first report March 21)
	Sabah region (eight districts), Malaysia	5/26	ASF	Over 933 died or were culled.
	Ebonyi State, Nigeria	5/25	ASF	311 pigs died
1	Zanzan district (borders with Ghana), Cote D'Ivoire	5/17	ASF	30 pigs died and 69 pigs were culled (Last report → June 2020).
1	Yamanashi prefecture, Japan	5/11	CSF	The third outbreak in a pig farm in 2021. Over 2500 pigs destroyed.
2	Thammarat (Southern) and Kalasin province (Northeastern region), and other locations across the country, Thailand	5/21 - 5/25	PRRS	Multiple farms affected. Authorities are destroying and burying to prevent the spread.
1	Ninh Binh, Vietnam	5/6	ASF	2904 pigs destroyed.
1	Gangwon province, South Korea	5/5	ASF	First outbreak in 7 months. 401 animals were destroyed.
1	Chernivets'ka, Ukraine	4/29	ASF	21890 animals at risk.

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

African Swine Fever

ASIA

In May, four **countries** - China, Indonesia, South Korea, the Philippines, and India - reported new ASF outbreaks. Currently, there are over 1,400 ongoing official outbreaks in the region.

Vietnam

As of June 30, Vietnam will halt all imports of live pigs from Thailand

On May 19, according to information from the Vietnamese authorities, ASF was detected in a batch of 980 pigs imported by *Senat One Member Limited Liability Company*, in Phu Binh district, Thai Nguyen province (northern Thailand near Hanoi) (Map 1). The batch entered the country from Thailand through the South Lao Bao international border gate, Huong Hoa district, Quang Tri province.

At arrival, pigs were quarantined at a farm in Tan Dinh village, Cam Thanh commune, Cam Lo district, Quang Tri province, and sampled by the authorities. Immediately after detecting the disease, animals were culled on Monday, May 21.

Since the beginning of 2021, ASF has re-emerged in several districts of Vietnam (Cam Lo, Trieu Phong, Huong Hoa, Vinh Linh, and Dong Ha), affecting thousands of pigs. The reason seems to be that farmers re-populated too soon, before the virus was eliminated from the farm, or did not ensure the effective implementation of cleaning disinfecting protocols or biosecurity measures to prevent re-incursion.



Map 1. Location of the outbreak detected in imported pigs from Thailand

Thailand response

Local news reported that veterinarian Sorawit Thanito, Director-General of the Department of Livestock Development (DLD), acknowledged the letter sent by the Ministry of Agriculture and Rural Development (MARD) in Vietnam to the Thai Embassy in Hanoi stating that Vietnam will prohibit the importation of live pigs from Thailand, effective June 30.

The DLD, after conducting traceability checks, confirmed that the lot of pigs tested negative to ASF before being exported in accordance with the requirements.

However, to regain the confidence of the trade country partner, the DLD has delayed exports of live pigs from farms and companies that Vietnam has said have detected such positive results and will expedite establishing an investigation committee to check all the facts and then summarize the report to Vietnam.

In addition, the DLD communicated that:

- Pre-export live pig inspection measures have been upgraded to be more stringent. All pig export operators have been notified.
- All live pigs to be exported to Vietnam, after the lift of the restriction, will be subject to laboratory testing at the port quarantine station again.
- Before permission to export pigs to be granted, swine samples will be collected randomly on every pig transport vehicle at the pig transfer point at the port of export or the point at the animal quarantine station designated (10 samples/truck).

It is worth noting, despite these measures and controversy, Thailand has not yet reported any ASF outbreak

EUROPE

In April, **three countries** - Romania, Russia, and Ukraine - reported new ASF outbreaks in pigs. Germany, Bulgaria, Hungary, Romania, Russia, Slovakia, Lithuania, and Latvia have reported cases of ASF on wild boar (ADIS system).

Since the beginning of 2021, European countries have registered 485 outbreaks in domestic pigs across Poland, Romania, Serbia, and Ukraine as well as over 6600 cases in wild boar across 12 countries. (23/5_EC ADNS disease outbreaks report/).

RESEARCH HIGHLIGHT

Ability of different matrices to transmit African swine fever virus

Summary: Scientific opinion summary (adopted by EFSA)

This opinion assessed the risk posed by different matrices to introduce African swine fever virus (ASFV) to non-affected regions of the EU.

Matrices assessed are feed materials, enrichment/bedding materials, and empty live pig transport vehicles returning from affected areas. Although the risk from feed is considered to be lower than several other pathways (e.g., contact with infected live animals and swill feeding), it cannot be ruled out that matrices assessed in this opinion pose a risk.

Evidence on survival of ASFV in different matrices from literature and a public consultation was used in an Expert Knowledge Elicitation (EKE) on the possible contamination of products and traded or imported product volumes used on pig farms. The EKE results were used in a model that provided a risk-rank for each product's contamination likelihood, its trade or import volume from affected EU or Eurasian areas(N) and the modeled number of potentially infected pig farms.

The products ranking higher regardless of origin or destination were:

- Mash and pelleted compound feed
- Feed additives and cereals

Bedding/enrichment materials, hydrolyzed proteins, and blood products ranked lowest regardless of origin or destination.

Empty vehicles ranked lower than compound feed but higher than non-compound feed or bedding/enrichment material. It is very likely (95–99% certainty) that compound feed and cereals rank higher than feed materials, which rank higher than bedding/enrichment material and forage.

As this is an assessment based on several parameters including the contamination and delivery to a pig farm, all of which have the same impact on the final ranking, risk managers should consider how the relative rank of each product may change with an effective storage period or a virus inactivation step.

[LINK to the full report](#)

Classical Swine Fever

ASIA

Japan

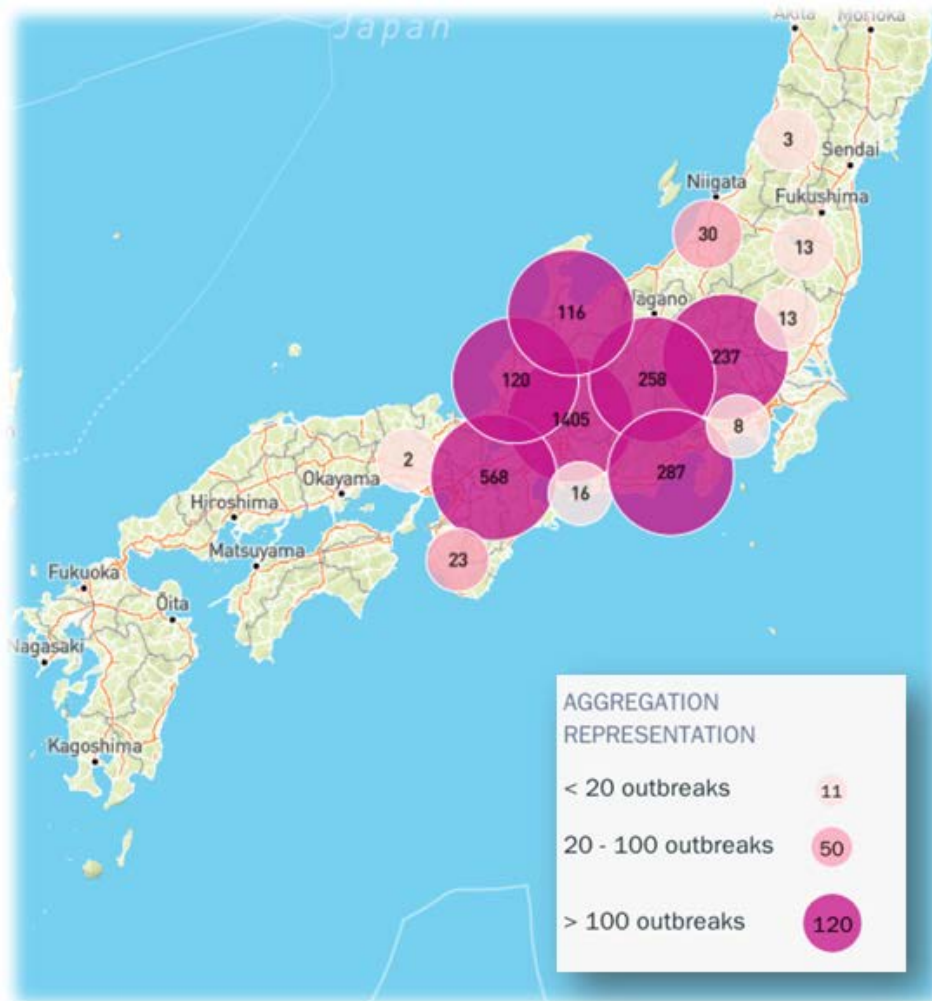
On May 10, a classical swine fever (CSF) outbreak was detected in Chuou-City, Yamanashi prefecture. The pig farm owner reported to Yamanashi Livestock Hygiene Service Center (LHSC) about an increase in the mortality of pigs. Veterinary officers conducted a clinical inspection and collected samples from pigs in the same pigpen. Samples returned positive, making this the 68th farm affected by the disease since the first case report in September 2018.

Yamanashi is one of the prefectures (30/47) where vaccination of domestic pigs was authorized back in October 2019. Sequencing of the RT-PCR-positive sample, conducted at the National Institute of Animal Health, confirmed that the outbreak was caused by a wild strain, rather than associated with the vaccine.

So far in 2021, Japan has reported three outbreaks in farms:

<i>Prefecture</i>	<i>Date</i>	<i>Animals dead/culled</i>
Nara	3/29	1,100
Gunma	4/16	9,757
Yamanashi	5/26	2,523
Total		13,380

Since the first outbreak was reported in September 2019, 234,572 animals died or were culled.



Map 2.

Accumulated CSF outbreaks distribution in Japan

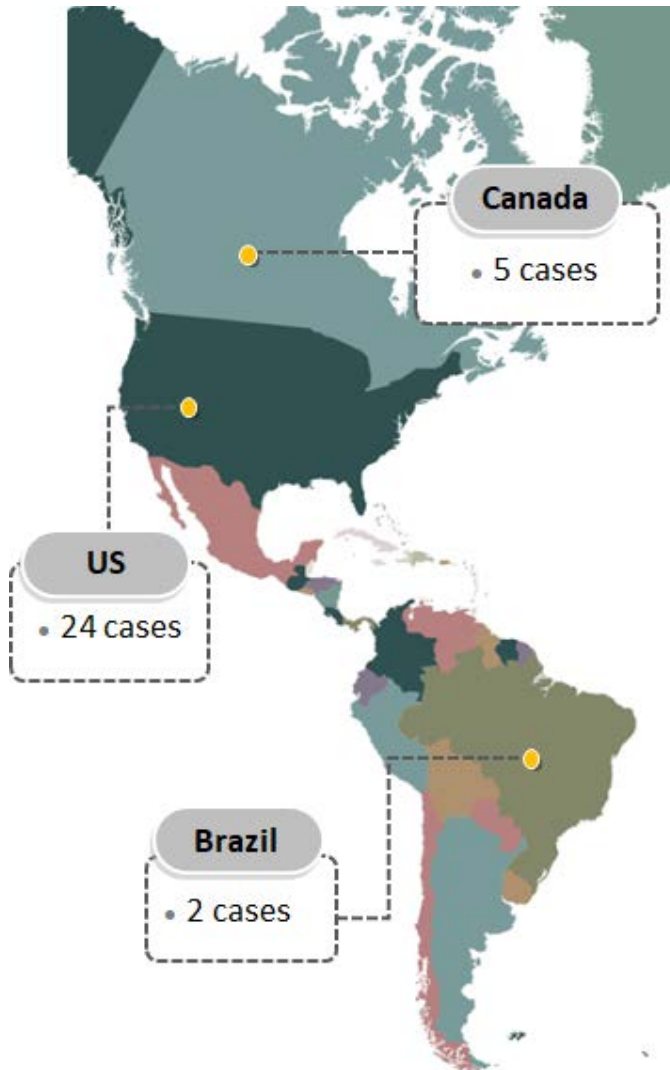
Influenza A (H1N2)v

AMERICA

Canada

On April 30, Manitoba’s authorities reported the detection of two separate cases of variant influenza viruses in two unrelated individuals in different communities in southern Manitoba. One is a case of human influenza A(H1N2)v and one is a case of human influenza A(H1N1)v.

In an [official statement](#), health officials noted that both cases appear to be isolated cases. The investigations are ongoing to determine how the transmission may have occurred for these individuals. Both had either direct or indirect exposures to pigs. Based on available evidence, the current assessment is that there is no increased risk to people - with no evidence of sustained human-to-human transmission at this time - or the food supply chain at this time.



The viruses were detected in early April after the two individuals independently sought testing after developing influenza-like symptoms. The individuals, who experienced mild symptoms, were tested and then recovered. The tests came back negative for COVID-19, but were later identified as a case of human influenza A(H1N2)v and human influenza A(H1N1)v through regular influenza surveillance processes. ([Link](#))

This is the first report of influenza variants in Canada after the case reported last December, which was the first case since 2005 when reporting became mandatory (Map 3).

H1N1v and H1N2v are rare. To date, there's no evidence of sustained person-to-person spread. This (H1N1)v virus differs from the now seasonal influenza A(H1N1) virus that emerged from swine back in 2009. Worldwide, only 28 cases of H1N2v have been reported in humans since 2005.

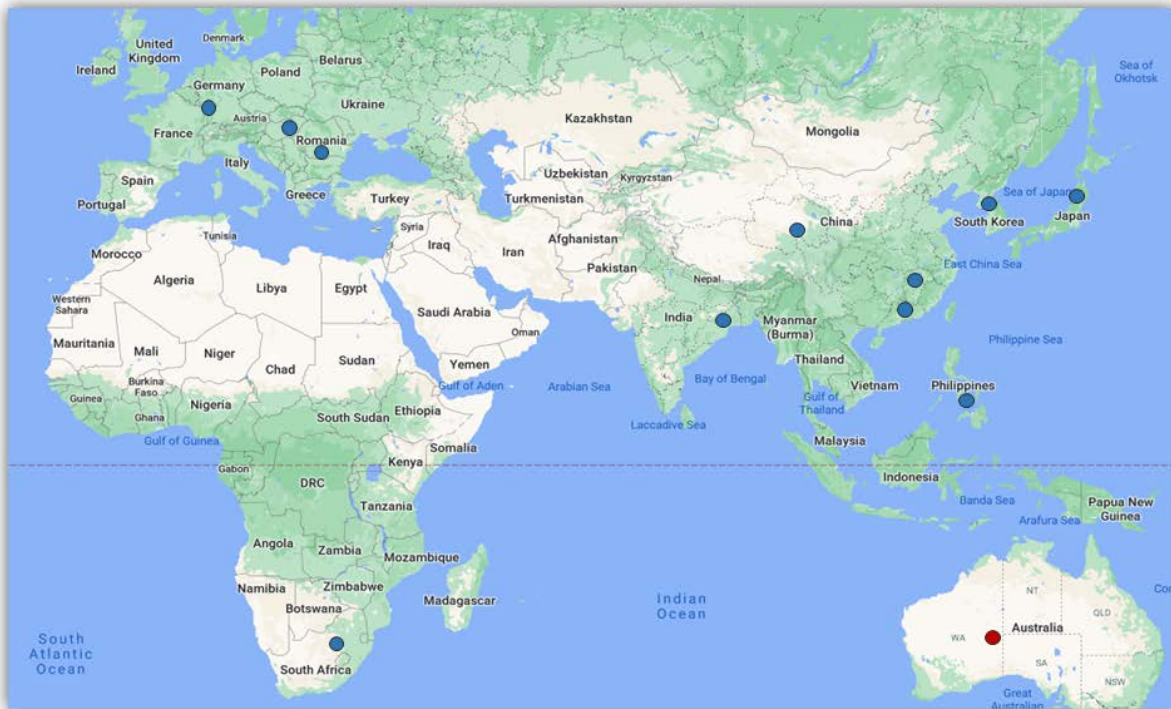
In Canada, there have only ever been two confirmed cases of H1N1v, and only two confirmed cases of H1N2v. At this time, there's no increased risk to people and no evidence of further spread.

Map 3. Global distribution of historic cases of H1N2v, and H1N1v cases (since 2005 when the report became mandatory: Worldwide, only 31 cases of H1N1v, and 29 cases of H1N2v, have been reported in humans since 2005.)

Fact box: Influenza in swine

Certain variants of type A influenza viruses have been identified both in pigs and humans. The main variant of flu viruses circulating in U.S. pigs in recent years are referred to as 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 variants of influenza viruses, [visit the CDC website](#)



Map 5. 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 and included

OIE - [WAHIS interface - Immediate notifications](#)

OIE - [OIE Asia Regional office](#)

DEFRA - [Animal diseases international monitoring reports](#)

CAHSS - [CEZD Weekly Intelligence Report](#)

European commission - [ADNS disease overview](#)

AMERICA

Canada -

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<https://www.canada.ca/en/public-health/services/diseases/human-influenza-a-h1n2-v-swine-origin.html>

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Vietnam -

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India -

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Malaysia -

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AFRICA

Nigeria -

<https://allafrica.com/stories/202105250085.html>

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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