

# Swine Disease Global Surveillance Report

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

## PROJECT

The aim of these reports is to have a support system for near real-time identification of hazards that will contribute to the mission of assessing risks to the industry and ultimately, early detect, identify, 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 is then published in the report.

***Disclaimer:** 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.*



UNIVERSITY OF MINNESOTA



Swine Health Information Center

### *UMN Technical coordination*

Eliana Paladino<sup>1</sup>, Auguste Brihn, Sol Perez,  
Andres Perez<sup>2</sup>

### *Expert Focus group*

Jerry Torrison, Montserrat Torremorell,  
Cesar Corzo, Paul Sundberg, John Deen

<sup>1</sup>Project coordinator: [epaladin@umn.edu](mailto:epaladin@umn.edu)

<sup>2</sup>Principal investigator: [aperez@umn.edu](mailto:aperez@umn.edu)  
[www.cahfs.umn.edu](http://www.cahfs.umn.edu)

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## Swine Disease Global Surveillance Report

Monday, December 3, 2018 – Monday, January 7, 2018

### Report highlights:

- Heilongjiang province reported the largest infected farm since the start of the epidemic in China
- Carcass positive for African swine fever (ASF) found on Taiwan shore
- The largest outbreak of CSF in a Japanese farm since its recurrence in last September reported
- ASF outbreak outside the control zone in Belgium reported, close to the border of France

### AFRICAN SWINE FEVER

- *Southeast Asia*

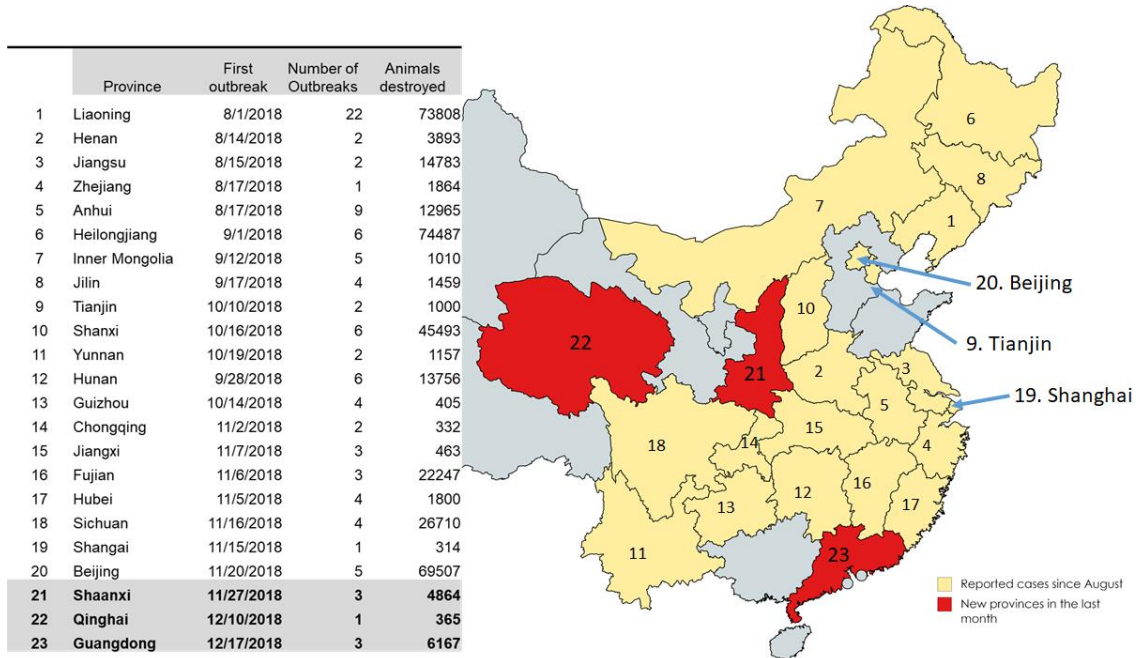
December presented a continued expansion of ASF cases in China, reaching a total of 23 provinces officially reported being affected by the epidemic, and with the biggest outbreak until now reported in a farm with 73,000 animals in Heilongjiang province (northeast China). China has culled more than 630,000 pigs across the country since the first outbreak, the provincial government in northern China's Hebei province said during a press conference on December 7. Additionally, the first confirmed case of contaminated feed produced by Tianjin NP Proteins, a lot of 74 tons, was reported on December 21.

Subsequently, concerns in the region have escalated regarding the risk of ASF expansion beyond Chinese borders. In the last 10 days, having overcome the 100 outbreaks officially reported, Taiwan, South Korea, Thailand, Vietnam, Philippines, and Malaysia, among others, have communicated stepping up their efforts to prevent the entrance of the virus to their territories. Malaysia and Myanmar have expanded the band on pork products such as canned pork, sausage casings, sliced pork, smoked ham, and pork enzymes, besides live pigs and frozen pork (banned since last September), after South Korea, Japan, and Taiwan reported the detection of ASF virus in processed pork products in airports and ports. Taiwanese authorities have begun carrying out county-wide inspections after a carcass positive to ASF was found in Taiwan's offshore Kinmen County last Monday.

To prevent the slaughtering of hogs illegally, China has launched a campaign that will last from December 2018 to May 2019 to strengthen inspections of slaughterhouses and initiate the building more large-scale slaughterhouses to aid in the control of ASF. Beijing is also planning punish more severely those who operate without government permits.

In this regard, Chinese authorities announced further regulations for slaughterhouses to hamper the spread of the virus:

1. The slaughterhouse must strictly carry out the investigation and reporting of ASF, and take the initiative to accept supervision and inspection.
2. The slaughterhouse must be strictly inspected and it is not allowed to acquire or slaughter pigs in any of the following circumstances:
  - a. There is no valid animal quarantine certificate;
  - b. The ear tag is incomplete or the quarantine certificate is inconsistent with the ear tag information;
  - c. The animals have been illegally transported.
3. Batch slaughter must be carried out according to different sources of live pigs. After each batch of pigs is slaughtered, the temporarily stored blood must be tested for ASF virus (by PCR).
4. If the detection of ASF is positive, the slaughterhouse must report the test results to the local authorities, and submit the samples for confirmation. After confirmation culling, disposal, cleaning and disinfection procedures must be put in place. Production will be resumed after audit by the local veterinary service animal husbandry and veterinary department take place (after suspending operations for 48 hours).
5. Animal quarantine certificates must only be issued for pigs that have a negative test result (by PCR) for ASF and are quarantined according to current regulations. Slaughterhouses must take the initiative to cooperate with the official veterinary services and should not refuse, obstruct, or interfere with the verification procedures.
6. Veterinary services must strengthen training, guidance, and inspection of activities at slaughterhouses, emphasizing the importance of standardize sampling, testing, and recording.
7. If ASF is detected in a slaughterhouse, the local veterinary service must organize the traceability tracking of the positive pig and pig products, and strictly control the pig source and its surrounding areas, if the case involves other administrative areas, the relevant local authorities need to be notified.



Map 1: Chinese provinces that have reported ASF outbreaks since last August. In red: new cases during December.

**Risk: illegal meat smuggling by passengers**

Since last August, ASF has been detected in pork products found in luggage in Hokkaido airport (Japan), Chiang Rai airport (Thailand), and Taiwan in multiple airports. The Taiwanese Bureau of Animal and Plant Health Inspection and Quarantine reported that 10 out of 708 meat products detected by customs officers since August 2018 were ASF positive. Several countries are setting up stricter measures by enforcement agencies at international airports and entry points to prevent pork products from the affected countries from being brought through illegal importations. Taiwan, Japan, and Malaysia have toughened up their measures at ports of entry, including substantial increases in fines for passengers carrying meat products. Despite these actions, inspectors at Taiwan’s main airports have still not detected a decrease in the frequency of offenders.

In this regard, Canadian producers have communicated their concern regarding the current number (n=17) of sniffer dogs available in Canada, stating that it is insufficient to cover all the flights coming from infected countries. In contrast, Taiwan, who currently has 47 sniffer dogs and where authorities have said that the training lapse required to have dogs ready to work is four to six months, is planning to deploy more sniffers to increase the pressure of screening. Furthermore, another challenge that arises from these findings is how to build the sufficient infrastructure to screen not only flights from infected countries but also from non-infected countries which their airports act as regional or global connection hubs, implying that a significant flux of passengers coming from infected countries could be connecting through these hubs.

## Taiwan increasing concerns

Taiwanese authorities have consistently claimed there is a lack of transparency regarding ASF information reported by China. On December 24, the Council of Agriculture deputy chief noted that it is considered likely that the real number of ASF outbreaks in China is much higher than what has been reported by the authorities. Lai Shioh-suey, emeritus professor at National Taiwan University's School of Veterinary Medicine, said China could be underreporting the number of outbreak cases, given that there are roughly 430 million pigs in China. According to his estimation, the possible number of pigs infected could be well over 100 million.

Taiwan's Premier William Lai identified ASF as one of the government's priorities for 2019. Taiwan has been on high alert as the disease has been spreading around China, with almost daily occurrences of travelers trying to smuggle pork and other banned meat products onto the island despite rising fines and more thorough inspections.

Taiwanese authorities reminded the public that when foot-and-mouth disease (FMD) reached Taiwan's shores in 1997, more than 4 million hogs had to be culled, costing the economy US \$5.5 billion, warning that today's threat from ASF is even more serious than FMD.

- *Europe*

## Czech Republic claims successful eradication of ASF

The Czech Republic is considering the ASF outbreak there to be resolved and Czech authorities are removing restrictions on the part of the country that was affected by ASF. The outbreak first began on June 21, 2017, in Zlin region in the east of the country, about 300 km from the capital, Prague, where ASF was detected in wild boar. Authorities managed to contain the disease in a relatively small area through the use of fences, strict movement controls, and restrictions on game hunting. Since April 2018, there have been no new findings of ASF. Czech State Veterinary Services (SVS) removed the label of high risk from the Zlin region, movement restrictions have eased, and blanket bans on hunting has been lifted.

The outbreak in the Czech Republic successfully demonstrates the management and eradication of ASF in a small area while simultaneously preventing its spread to domestic pigs. This is in contrast to other EU member states, including Poland, Hungary, Romania, Bulgaria, and Belgium which have not yet successfully eradicated ASF. In response to the Czech Republic's eradication announcement, Czech agricultural ministry has released a statement saying Serbia has promised to open its market to Czech pigs and pigmeat.

## ASF wild boar close to the border with France



On December 17, in the village of Gerouville, Belgium, a wild boar carcass was confirmed positive for ASF. The village of Gerouville is located 3 km from the French border. Ten additional carcasses were found on December 22 although none of these tested positive for ASF. Following the OIE’s guidelines, Belgium created three zones within the infected area to combat ASF spread. The kernel and buffer zone (together form containment zone) act to contain the virus while the reinforced observation zone is for surveillance. The outbreak in Gerouville was reported outside the containment zone. (Please refer to [LINK](#) for further information detailing Belgium’s action plan and maps).

Map 2. Belgium outbreak in wild boar.

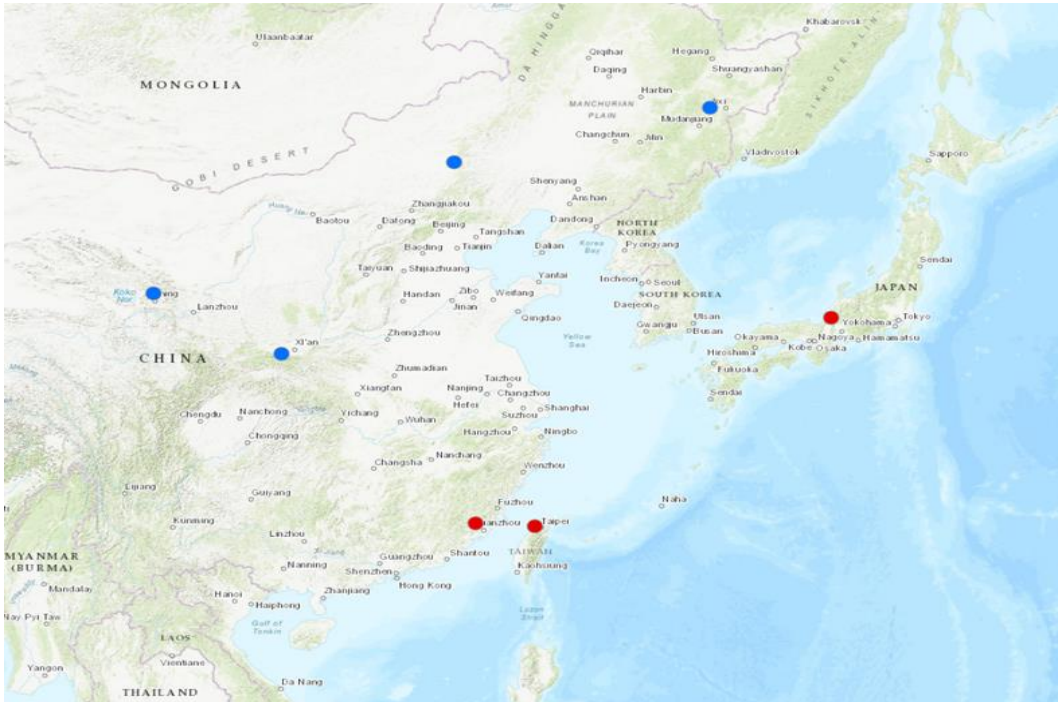
French authorities have stepped up surveillance since ASF was confirmed in southern Belgium in September 2017. France has placed fences at its high-risk northern border with Belgium to prevent wild boar from entering and have banned hunting in associated zones. Meurthe-et-Moselle is one of the several regions covered by the surveillance zone at the border. The fencing will cover part of the border and also includes repellent products at other locations where fencing is not possible or impractical, such as on roads.

Belgium has slaughtered several thousand pigs in the containment zone to prevent ASF reaching farm herds.

## CLASSICAL SWINE FEVER

- **Japan**

On December 25, Japan reported the **sixth and biggest outbreak of Classical swine fever (CSF) on a farm** with approximately 1,000 sows since last September, when the first case of the disease since 2007 was reported by the country. Several cases in wild boar have been reported during the last three months. Current lines of investigation make government officials suspect Chinese meat products as a source of introduction of CSF virus into the country, as genetic analysis indicated that the virus is similar to a strain found in China and Mongolia. Bait vaccination of wild boar against CSF is being discussed by the central government.



**December Report Map:** The locations mentioned in this report are colored in the maps below according to **significance score**, which are based on the identified hazards (list of worldwide events below) and potential risks to the US swine industry: **1: Blue** – no change in status this month, **2: red** - needs extra attention as the situation is dynamic; **3: black (when appropriate)** - the change this month requires consideration of change in practices to reduce exposure by the US industry.

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<b>Event #</b>	<b>1</b>			Taipei, Dec. 20 (CNA) Taiwan's Council of Agriculture (COA) announced Thursday that Chinese sausage products brought by a passenger into Taiwan have been found to contain the highly contagious African swine fever (ASF) virus. The pork sausages brought by the traveler from China's Macau to the Kaohsiung International Airport had tested positive for the virus, becoming the sixth case of African swine fever to be brought to Taiwan from abroad, according to the COA's Bureau of Animal and Plant Health Inspection and Quarantine.	
Date of the event:	9/17/18				
Date of publication:	12/20/18				
Location:	Airport				
	<b>Taiwan</b>				
Disease type:	FMD				
Species affected:	Pork products				
	<b>Porcine</b>				
				Morbidity: -	Mortality: -
Significance score	<b>2.00</b>	*		Reporting source:	OIE
<b>Event #</b>	<b>2</b>			Three outbreaks in the region Primorskiy Kray (Yakovlesky, Primorskiy, Mikhanjosky) affecting wild boars were confirm by Primorsky veterinary Laboratory (Local laboratory) and All-Russian Research Institute for Animal Health (National laboratory). Surveillance within containment and/or protection zone, Quarantine Official disposal of carcasses, by-products and waste, Disinfection	
Date of the event:	11/16/18				
Date of publication:	12/7/18				
Location:	Primorskiy Kray				
	<b>Russia</b>				
Disease type:	CSF - Classical Sw				
Species affected:	Wild animals				
	Porcine				
				Morbidity: -	Mortality: -
Significance score	<b>1.00</b>	*		Reporting source:	OIE
<b>Event #</b>	<b>3</b>			First two outbreaks of ASF confirmed in Shaanxi province, affecting a total of 4831 susceptible animal. Diagnostic confirm by China Animal Health and Epidemiology Center, National Research center for exotic animal diseases (National laboratory). Control measures applied (Movement control inside the country, Surveillance outside containment and/or protection zone)	
Date of the event:	-				
Date of publication:	12/7/18				
Location:	Shaanxi province				
	<b>China</b>				
Disease type:	ASF				
Species affected:	Farm animals				
	Porcine				
				Morbidity: -	Mortality: -
Significance score	<b>1.00</b>	*		Reporting source:	OIE
<b>Event #</b>	<b>4</b>			First outbreak of ASF confirmed in Qinghai province, affecting backyard animals. Diagnostic confirm by China Animal Health and Epidemiology Center, National Research center for exotic animal diseases (National laboratory). Control measures applied (Movement control inside the country, Surveillance outside containment and/or protection zone)	
Date of the event:	12/10/18				
Date of publication:	12/14/18				
Location:	Qinghai province				
	<b>China</b>				
Disease type:	ASF				
Species affected:	Backyard				
	Porcine				
				Morbidity: -	Mortality: -
Significance score	<b>1.00</b>	*		Reporting source:	OIE
<b>Event #</b>	<b>5</b>			In Meix-devant-Virton, Belgian border town, not far from Thonne-La-Long, 10 carcasses of wild boar were found Thursday, Belgian side, behind the fences installed , in the so-called buffer zone at the precise place called "Perrière In front of the container park. Monday, not far from Gérouville, it is another carcass which was found against the closing wires of this buffer zone, this carcass was infected by the virus of the African swine fever. On site, we realize that it is not this fence that will stop the plague especially as it is interspersed with roads of the Walloon automobile network and forest roads in macadam	
Date of the event:	12/22/18				
Date of publication:	12/22/18				
Location:	Meix-devant-Virton (less than 8km from the border with France)				
	<b>Belgium</b>				
Disease type:	ASF - African Swir				
Species affected:	Wild boar				
	Porcine				
				Morbidity: -	Mortality: -
Significance score	<b>2.00</b>	*		Reporting source:	OIE



<b>Event #</b>	<b>6</b>						
Date of the event:	12/23/18	<p>The 6th affected farm was detected, the biggest since the reintroduction of the disease in the country. On the 23rd of December, a pig was found to be positive for CSF by RT-PCR through monitoring program on farms within 10km-radius of the affected farm of the 3rd and 4th case. Local official veterinarians of the Gifu Central Livestock Hygiene Service Centre (LHSC) visited the farm on the 24th of December. The animal and 3 other pigs which were kept at the same barn were culled and necropsy examination was conducted at the Gifu Central LHSC. Tissue and blood samples were tested for Classical Swine Fever virus (CSFV) by RT-PCR at the Gifu Central LHSC and found to be positive on the 25th of December. Stamping out is being carried out. The National Institute of Animal Health (NIAH) carried out the sequencing analysis of the amplified products and the NIAH confirmed that this was a case of Classical Swine Fever (CSF) on the 25th of December. Movement and shipment restrictions are imposed on the farms within a radius of 3km and 10km of the affected farm respectively. 2. 3rd Affected farm Removal of shipment restriction zone (SRZ): On 00:00 of 25th December, shipment restrictions, which were established within 3-10 km radius of the affected farm, were lifted as 17 days have passed after the completion of full implementation of control measures (stamping out, disinfection etc.) at the 3rd affected farm.</p>					
Date of publication:	12/25/18						
Location:	Gifu City, Gifu						
	<b>Japan</b>						
Disease type:	CSF - Classical Sw						
	Farm animals						
Species affected:							
	Porcine						
					Morbidity: -		Mortality: -
Significance score	<b>2.00</b> *				Reporting source:	OIE	
<b>Event #</b>	<b>7</b>						
Date of the event:	12/29/18	<p>Biggest outbreak reported since the bigginging of the epidemic, affecting a farm with 73.654 susceptible animals. 4686 cases, 3766 deaths, 2405 killed and disposed. Based on the current situation and the diagnostic capacity of the laboratories of the provincial animal disease prevention and control center, the ministry of agriculture and rural affairs has authorized and stipulated qualified laboratories that meeting biosafety conditions to diagnose the local African swine fever in the places where the epidemic has occurred.</p>					
Date of publication:	2/1/19						
Location:	Heilongjiang province						
	<b>China</b>						
Disease type:	ASF - African Swir						
Species affected:	Farm animals						
	Porcine						
					Morbidity: No		Mortality: -
Significance score	<b>1.00</b> *				Reporting source:	OIE	
<b>Event #</b>	<b>8</b>						
Date of the event:	12/31/18	<p>Taipei, Jan. 3 (CNA) Test results conducted on a pig carcass found in Taiwan's offshore Kinmen County came back positive for African swine fever (ASF), the Council of Agriculture (COA) confirmed Thursday. The dead hog was found Monday on a beach in Kinmen County's Jinsha Township by Coast Guard personnel just kilometers away from China's southeastern coast, raising concerns that the outbreak of ASF in China could spread to Taiwan.</p>					
Date of publication:	1/3/19						
Location:	Kinmen county						
	<b>Taiwan</b>						
Disease type:	ASF						
Species affected:	Pig Carcass						
	Porcine						
					Morbidity: -		Mortality: -
Significance score	<b>2.00</b> *				Reporting source:	OIE	