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

SHiC
Swine Health Information Center

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/

Spontaneous reporting TOOL

Swine Disease Global Surveillance Report

Wednesday, October 7, 2020 – Tuesday, November 3, 2020

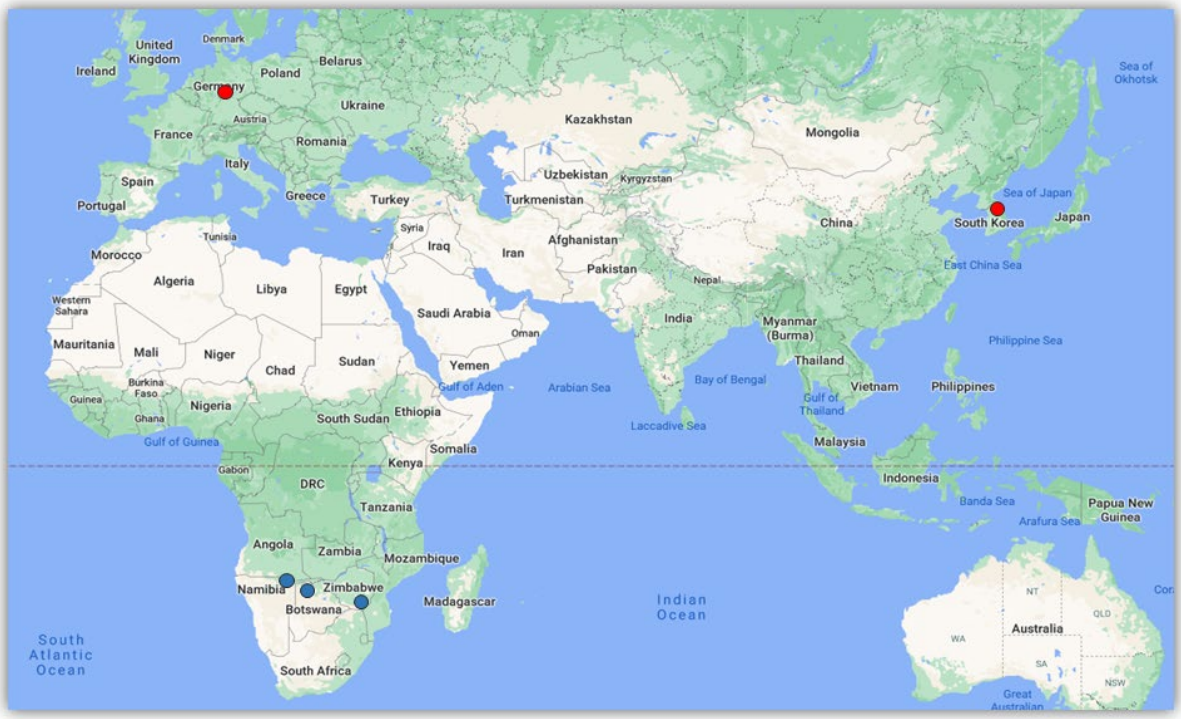
Report Highlights

- **First ASF report in Saxon province (Germany)**: ASF entered the second state in Germany, setting a new third restriction zone in the state, which is bordered by Brandenburg to the south.
- **South Korea:** New ASF outbreaks in domestic pigs after almost a year from the last report.
- **ASF detected in Russian pork products:** Traces of ASF were found in pork products in several regions.
- **PRRSV an emergent issue in Russia:** authorities update preventive and control guidelines.

OCTOBER OUTBREAKS BRIEF

R	Location	Date	Disease	Impact
2	Saxony region, Germany	10/31	ASF	First report of ASF in wild boar in the west bordering region to Brandenburg state.
2	Gangwon Province, South Korea	10/08	ASF	First two outbreaks in a commercial farm since October 2019 -- over 4,000 pigs were culled.
1	Chongqing municipality, China	10/09	ASF	First outbreak reported since July 25. Piglets (70) illegally transported to the southwestern city.
1	Malatso Village, Ngamiland, Botswana	10/14	FMD (SAT1)	First outbreak since December 2018. *Few clinical cases (13) were diagnosed within a communal area where over 16,000 head of cattle grazing.*
1	Masvingo province, Zimbabwe	10/12	FMD (Not typed)	First outbreak since December 2019.
1	Kavango East, Namibia	10/06	FMD (SAT2)	Five outbreaks have been reported since early this month in the northern region close to Angola's border.

The outbreaks described in the table are colored according to an assigned significance score. The score is based on the identified hazard and potential it has to 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 1. Location of the outbreaks reported throughout October - 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

Germany

ASF moves southwards

On October 31, the German Federal Agricultural Ministry (BMEL) confirmed the first case of ASF in wild boar in the eastern German region of Saxony. This animal was shot during a hunting session and didn't show clinical signs, according to German Ministry of Agriculture (Map 1).

Installment of new ASF core zone

The new case was found about 60 km (37.3 miles) south of the southernmost infected zone along the border with Poland (Oder-spree/Spree-Neisse) leading to the instalment of a new core zone in Maerkisch-Oderland. This new case was reported a day after the report of a new case of ASF west 20 km (about 12.5 miles) of the southern core zone; requiring that zone to be expanded (Map 1).

So far, 123 cases have been detected since the first report on September 10.

As of November 2, 123 wild boar have been tested positive for ASF in Germany. These were found in Brandenburg State, the majority of them in the southern core zone, consisting of the Oder-Spree district (102 cases) and Spree-Neisse (14).In the northern core zone, including a part of Märkisch-Oderland district, 7 animals were tested positive, the German Ministry of Agriculture (BMEL) said.

The BMEL has activated the central crisis task force for animal diseases is in close contact with the European Commission and is in discussion with significant trading partners outside the EU in order, as far as possible, to maintain exports from ASF-free areas.

Distribution of ASF cases in wild boars by restriction zones

The federal authorities have also taken pre-emptive action to prepare for this emergency. The Ministry has amended the German Animal Health Act and the Federal Hunting Act to ensure that the competent authorities are in a position to issue the following orders in the event of an outbreak:

- Restriction of passenger and vehicular traffic within specific areas.
- Cordoning off of a specific area.
- Hunting restrictions or bans.
- Restrictions or bans on the use of agricultural land in order to prevent wild boar from migrating.
- Establishment of shooting lanes and intensified search for dead game to minimize infection risks for healthy wild boars.
- Possibility to commission third parties (e.g. professional huntsmen or forestry administration staff), where necessary, to undertake intensified hunting.

Map 2. Current distribution of restriction zones Germany

Establishing white zones

A "white zone" at the border to stop ASF

Based on the recommendations of a EU commission of veterinarians, Germany is working on setting so-called "white zones," or zones of 5km around the inner zones already established. This would be fenced off on the inside as well as the outside with a fence of 1.20m. Completion is expected to take a few weeks. Once the fences are ready, the intention is to shoot all game within the fences, creating a wild boar free corridor. A similar approach was used in both Belgium and the Czech Republic.

At the same time, a "*master plan with measures to eradicate the animal disease*" is being worked on. According to EU regulations (Directive 2002/60/EC), this plan must be submitted to the European Commission within 90 days of the first confirmed ASF case (first outbreak September 10th → December 9th deadline for master plan). According to the German Ministry spokesperson, the plan must include long-term measures to combat the animal disease in the designated endangered area and an adjoining buffer zone.

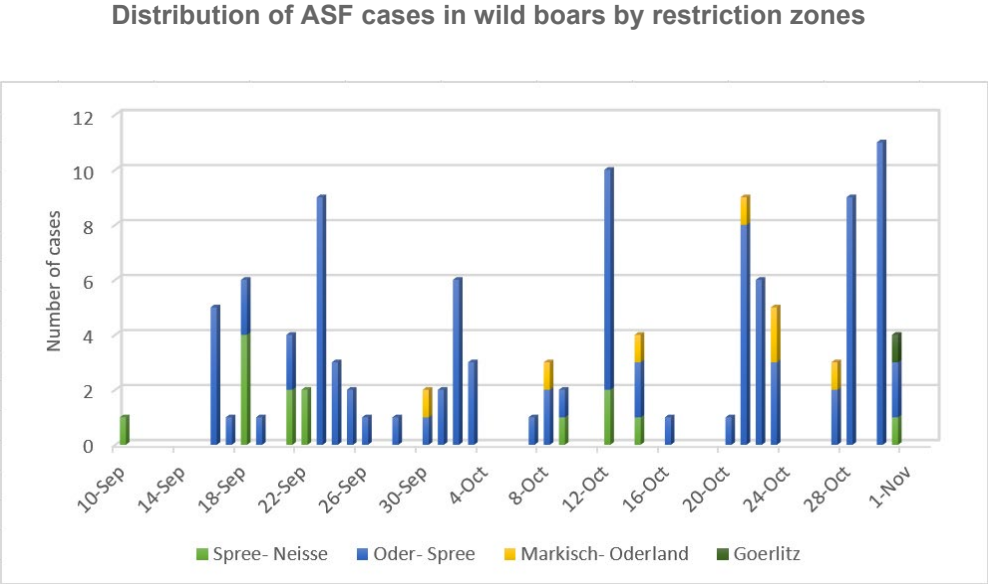


Figure 1. ASF cases reported since September 10, in Brandenburg and Saxony states.

What is happening next door?

Poland detected the first ASF case right on the border with the second German restriction zone. This has expanded the German-Polish cluster significantly, covering an area of approximately 98 x 80 miles.

By October 22, there were over 2,000 ASF records in wild boars in western Poland and 12 outbreaks in pig farms.

The current European Union ASF regionalization map can be accessed following this LINK

ASIA

South Korea

New ASF outbreaks in domestic pigs after almost a year from the last report

On October 9, authorities reported the first outbreak of ASF in domestic pigs since October 2019 in the northeastern county of Hwacheon, 75 miles east of Seoul. Official veterinary officers ordered culling all pigs (over 4,000 pigs total) within a 6-mile radius of the affected farms (Farm #1: 721 pigs affected; Farm #2: 1020 pigs affected). The second case was reported on a farm located 1.3 miles from the farm

first detected. Local authorities have also taken samples from 114 farms in eight adjacent cities/counties; all tested negative so far.

Over 800 cases of ASF in wild boars near the inter-Korean border were reported in the last year.
Russia

ASF contaminated pork products

On October 22, Russia's agriculture safety watchdog reported that traces of ASF had been found in pork products in several regions. Authorities were urged to step up controls and make sure producers don't use ill or infected pigs for production. The DNA of ASF was detected in sausages produced by a meatpacking plant from the Voronezh region (bordering with Ukraine), and then stored in a warehouse in Veliky, Novgorod oblast (Map 3). These products were supplied to several central regions of the country creating a significant risk of spreading the virus across regions of the country.

Map 3. Origin of the products contaminated with ASF

Porcine reproductive and respiratory syndrome virus (PRRSV)

EUROPE

Russia

Russian authorities have just released new regulations to help the prevention and control of PRRSV outbreaks. The document released on October 28 (translated version available upon request - SDGS@umn.edu), which will be entering into force in January 2021, gives special attention to the use of PRRSV vaccines and the procedures that producers need to follow in case of suspecting PRRSV outbreak.

Highlights:

- In response to any suspicious of PRRSV in a farm, producers are obliged to: inform, within 24 hours, by any available means to an official veterinary authority in the region; to assist specialists of the state veterinary service in taking samples of biological and (or) pathological material from pigs and sending samples to a laboratory included in the system of the State Veterinary Service of the Russian Federation, or another laboratory (testing center) accredited in the national system.
- A 40 day quarantine is established as soon the PRRSV diagnosis is confirmed.
- All export of live pigs and pig slaughter products and boar semen outside the control zone is prohibited. Except for farms referred to compartments III and IV (based on current compartmentalization regulation).

- Implementation of PRRSV vaccination should be carried out with vaccines approved for circulation on the Russian Federation's territory. It should be noted that the inactivated emulsified vaccine against PRRS is produced by the Rosselkhoznadzor institute - the Federal Center for Animal Health.

What is the local situation regarding PRRSV?

- Information about the virus from Central Eastern Europe is relatively scarce and has never been analyzed systematically.
- Initially, PRRSV 1 strains were thought to be genetically less variable. However, phylogenetic studies performed on Lithuanian, Belarussian, and Russian strains revealed an unexpectedly high degree of variability within this genotype and led to the definition of four genetic subtypes.
- Recent report describes PRRSV-1 strains from Eastern Europe have a high diversity. All three known subtypes (1, 2, 3) of PRRSV-1 have been detected in Russia. There are two different groups of viruses belonging to subtype 1: pan-European subtype 1 strains and insufficiently studied Russian strains.
- Notably, PRRSV2 is periodically detected on its own or simultaneously with PRRSV1 by veterinary diagnostic laboratories in Russia. However, due to the comparably low incidence of PRRSV2 detection, it is not considered and often goes unnoticed. The circulation of PRRSV2 further complicates the search for working control strategies, as no vaccines against PRRSV2 are currently available in Russia.
- Based on the poor performance of currently available vaccines (live and inactivated) and the genetic difference between the vaccine viruses and some field isolates, it is imperative to assess the efficacy of the available vaccines upon challenge with the Russian field strains.

References: Balka, 2018; Raev, 2020; Yuzhakov, 2020.

These updates came at the same time that unofficial reports suggest the emergence of strains with higher virulence and limited genetic similarity (<80%) to the strains in the formulation of currently available commercial vaccines in the country.

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EUROPE

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