Follow-up report 4 (Final report)

27/01/2022

The event is resolved. No more follow-up reports will be submitted.

Sender	Country/territory	Report ID
Delegate of Sweden	Sweden	FUR_153270
Event status	Self-declaration	
Resolved	No	

General information

Country or zone - Country	Disease - SARS-CoV-2 in animals (Inf. with)	Started on - 19/08/2021
Animal type - Terrestrial	Confirmed on - 19/08/2021	Causal agent - SARS-CoV-2
Ended on - 31/12/2021	Disease category - Emerging	Reported on - 27/01/2022
Reason - Emerging disease		

Disease impact

Outbreak morbidity - 0.02

Outbreak mortality - 0.02

Zoonotic potential - Yes

Zoonotic potential description - Matching sequences from sub-lineage B.1.1.464 have previously been described from at least 14 countries globally in samples originating from people.
The source of the virus is currently unknown, although introduction through COVID-19 infected people is considered likely.

See also further information under Epidemiological comments.

Epidemiology

Source of the event or origin of the infection - Unknown or inconclusive

Epidemiological commentsSARS-CoV-2 nucleic acids was detected using qRT-PCR in one out of six tracheal swabs sampled from mink found dead on the farm. Whole genome sequencing of the of virus has been carried out demonstrateding that the virus belongs to sub-lineage B1.1.464 of SARS-CoV-2. None of the amino acid mutations described on the spike protein and considered associated with adaptation to mink was present in the sequence. Matching sequences from sub-lineage B.1.1.464 have previously been described from at least 14 countries globally in samples originating from people. Moreover, this sub-lineage has also been detected in mink in two other countries. B1.1.464 has not been detected previously in Sweden.

Movement restrictions and strict biosecurity measures have been in place for all mink farms in Sweden since fall 2020, and all people associated with the farm in question have either had the infection (COVID-19 confirmed in farm workers in November 2020) or been vaccinated, or both. Moreover, a serological screening carried out in December 2020 demonstrated that also the mink on the farm had been exposed to SARS-CoV-2 although virus could not be detected at the time. Further investigations related to the outbreak are ongoing.

Whereas this is the first case detected in Sweden during 2021, SARS-CoV-2 (sub-lineage B1.1.39) was detected in 13 farms, all located in Sölvesborg, the County of Blekinge, in November 2020. Moreover, a serological screening carried out in December 2020 and which covered the majority of mink fur farms active at the time (26 out of 28), suggested that most of them had been exposed to the virus. High prevalence of specific SARS-CoV-2 antibodies were detected in mink from 23 farms, including in all farms that previously had been tested positive for SARS-CoV-2 nucleic acids. In the remaining three farms, all samples tested negative. Moreover, an active surveillance program targeting mink farmworkers demonstrated a clear association between presence of SARS-CoV-2 among the mink and COVID-19 in people associated to mink, supported by the results of the whole genome sequencing.

Given the extensive spread of SARS-CoV-2 among Swedish mink experienced during the fall 2020, with spill-over to people

associated to the affected farms, a concern was raised regarding the potential public health risk of allowing breeding to occur during the following season (i.e. spring 2021). With this in mind, and based on a risk assessment, a decision was taken to ban mink breeding during 2021.

For more information about the surveillance of mink-associated infections with SARS-CoV-2 in Sweden please see: https://www.sva.se/media/8d92f13caebf77b/mink-associated-infections-with-sars-cov-2.pdf

Control measures at event level

Domestic control measures

Applied
- Surveillance within containment and or the protection zone
- Traceability
- Surveillance outside containment and or the protection zone
- Official disposal of carcasses, by-products and waste
- Official destruction of animal products
- Movement control inside the country

Wild control measures

Diagnostic

Clinical signs - Yes

Method of diagnostic - Diagnostic test

Test name	Category	Test type	Laboratory	Species sampled	Outbreaks	Tested from	Tested until
Real-time polymerase chain reaction (real-time PCR)	Nucleic acid detection	Laboratory Test	National Veterinary Institute (SVA) National Laboratory	Mustelidae	0	19/08/2021	22/09/2021
Gene sequencing	Genotyping	Laboratory Test	National Veterinary Institute (SVA) National Laboratory	Mustelidae	0	19/08/2021	27/08/2021

Quantitative data summary

Measuring unit - Animal

Species	Type	Susceptible	Cases	Deaths	Killed and disposed of	Slaughtered	Vaccinated	Outbreak morbidity	Outbreak mortality
Mustelidae	New	-	-	-	-	-	-	-	-
Mustelidae	Total	11000	2	2	-	-	0	0.02	0.02
All species	New	-	-	-	-	-	-	-	-
All species	Total	11000	2	2	-	-	0	0.02	0.02

Event morbidity - 0.02

Event mortality - 0.02

Morbidity range - 0.02-0.02

Mortality range - 0.02-0.02

Outbreaks

ob_89972-Skara

Started on - 19/08/2021

First administrative division - Sweden

Ended on - 31/12/2021

Epidemiological unit - Farm

Geographic coordinates - 58.3562,13.3929

Approximate location - Yes

Location - Skara

Description of the affected populationThis is a mink farm with breeding animals for fur production. Samples were taken for analysis within a surveillance program which covers all mink farms in the country and is in accordance with Commission Implementing Decision (EU) 2021/788 for the monitoring and reporting of infections with SARS-CoV-2 in certain animal species. No increased morbidity or mortality had been observed on the farm.

Species	Type	Measuring unit	Susceptible	Cases	Deaths	Killed and disposed of	Slaughtered	Vaccinated
Mustelidae	New	Animal	-	-	-	-	-	-
Mustelidae	Total	Animal	11000	2	2	-	-	0
All species	New	Animal	-	-	-	-	-	-
All species	Total	Animal	11000	2	2	-	-	0

Outbreak name	Test	Result	Result date
ob_89972-Skara	Gene sequencing	Positive	27/08/2021
ob_89972-Skara	Real-time polymerase chain reaction (real-time PCR)	Positive	22/09/2021

Map legend

OUTBREAKS REPRESENTATION ON MAP

OUTBREAKS NATURE

Single / Cluster

- Domestic species
- Wild species
- Domestic & Wild

OUTBREAKS STATUS

- Outbreak currently reported
- Ongoing outbreak
- Resolved outbreak

AGGREGATION REPRESENTATION

- < 20 outbreaks — 11
- 20 - 100 outbreaks — 50
- > 100 outbreaks — 120

Les localisations des foyers ont été renseignées par les Services vétérinaires compétents et peuvent ne pas représenter l'emplacement exact d'un foyer. L'OIE n'assume aucune responsabilité quant aux données affichées.