To: (10)(2e) .[(10)(2e) @minvws.nl]; (10)(2e) [(10)(2e) @rivm.nl]; (10)(2e) (10)(2e) [(10)(2e) @rivm.nl]
From: (10)(2e))
Sent: Wed 5/13/2020 11:34:40 AM
Subject: FW: PRO/AH/EDR> COVID-19 update (177): Netherlands (NB) animal, farmed mink, Spain (CT) cat susp
Received: Wed 5/13/2020 11:34:47 AM

Deze is ook weer interessant. Zo te zien heeft WBVR een heel vragenuurtje voor hun rekening genomen. Opvallende dingen heb ik geel gemaakt, waaronder een passage met dat het niet onbekend is dat mensen van stofdeeltjes ziek kunnen worden. Verder leest het nu net alsof elk beest door een mens is aangehoest. En ik ben benieuwd waar dat op gebaseerd is want dan zou men standaard op alle farms bij de verzorging van deze beesten dus mondkapjes moeten dragen, om de beesten niet te besmetten maar ook om het weer niet terug te krijgen. Tot slot had ik toch echt een ander beeld van de stallen, wel een dak erop maar verder waait de wind erdoor dus ik ben benieuwd of het beeld wat men heeft bij 'indoors' gehuisvest wel klopt.

Groet, (10)(2e)

-----Oorspronkelijk bericht-----
Van: (10)(2e) @ (10)(2g) < (10)(2e) @ (10)(2g) - Namens (10)(2e) @ (10)(2g)
Verzonden: woensdag 13 mei 2020 00:56
Aan: (10)(2e) @ (10)(2g) (10)(2e) @ (10)(2g) ; (10)(2e) @ (10)(2g)
Onderwerp: PRO/AH/EDR> COVID-19 update (177): Netherlands (NB) animal, farmed mink, Spain (CT) cat susp

CORONAVIRUS DISEASE 2019 UPDATE (177): NETHERLANDS (NORTH BRABANT) ANIMAL, FARMED MINK, SPAIN (CATALONIA), CAT SUSPECTED
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A ProMED-mail post
<http://www.promedmail.org>
ProMED-mail is a program of the
International Society for Infectious Diseases <http://www.isid.org>

In this update:
[1] Netherlands: Questions and answers regarding infection with COVID-19 in mink
[2] China reclassifies fur animals as domestic livestock [3] Spain, cat tests positive

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[1] Netherlands: Questions and answers regarding infection with COVID-19 in mink
Date: Fri 8 May 2020
Source: Website of Wageningen University Bioveterinary Research (WBVR)
- News [abridged, edited]
<https://www.wur.nl/en/Research-Results/Research-Institutes/Bioveterinary-Research/show-bvr/Questions-and-answers-regarding-infection-with-COVID-19-in-mink.htm>

On 26 Apr 2020, it emerged that mink on 2 mink farms in the province of Brabant had contracted the disease COVID-19. On 7 May 2020, 2 other mink farms in the Province of Brabant were found infected. Wageningen Bioveterinary Research (WBVR) tested the animals and found that they were positive for coronavirus (SARS-CoV-2). Other animals, such as cats, may also be susceptible to this virus.

Below are frequently asked questions and answers about coronavirus in mink, the research currently being conducted and coronavirus in other kept animals.

1. Symptoms of the disease and the infection of mink

Q. How did the mink become infected?
A. Some employees at the mink farms have had symptoms of COVID-19. It appears that the virus was introduced to the mink via these employees.

Q. How many mink were infected?
A. Only a few mink showed symptoms of the disease on the farms. The mink are kept in separate pens, which means that there is little to no contact between the animals. It appears to be an acute outbreak, where the farms quickly overcome the peak of the disease. The chance that mink will function as a reservoir of the virus appears to be small.
Further research will be conducted.

Q. What symptoms did the mink display?
A. The infected mink suffered from gastrointestinal complaints and respiratory problems. The mortality rate at the affected farms was also higher than usual.

Q. Was it already known that mink are sensitive to coronavirus?
A. Mustelids such as mink are extra sensitive to coronavirus. Like humans, they have a protein on their lungs, the ACE2 receptor, to which the virus likes to attach itself. Humans also have this coronavirus binder on the mucous membranes of their mouths, for example. This protein appears to be a good predictor for possible infection with COVID-19.

Q. How was coronavirus diagnosed in mink?
A. The mink symptoms prompted the veterinarians to have an investigation carried out by the Animal Health Service. Since the animals tested negative for the most obvious bacterial diseases, GD Animal Health also tested for coronavirus (SARS-CoV-2) due to the alleged susceptibility of mink to infection and because individuals with COVID-19 symptoms were working on both farms. The PCR test showed an infection with coronavirus. A similar test at Wageningen Bioveterinary Research (WBVR) confirmed this result.

Q. What are the consequences for mink farms?
A. Mink farmers are now obliged to report symptoms of COVID-19 (respiratory problems and increased mortality) to the national animal disease reporting centre of the Netherlands Food and Consumer Product Safety Authority (NVWA).

The Dutch Ministry of Agriculture, Nature and Food Quality has also decided that mink are no longer allowed to be transported. The manure from these farms may no longer be removed either. The risks presented by the manure seem small but will be investigated further.

Additional protection recommendations have been drawn up for mink farms where contamination with SARS-CoV-2 has been established.

Q. Can mink transmit the virus to each other? (via inhalation)
A. Dutch researchers have shown that ferrets can infect each other via inhalation. Since mink are closely related to ferrets, it is possible that they can also transmit the virus to each other. However, no research has been conducted about this yet.

Q. Are further infections on mink farms expected?
A. Besides the infections found in the mink farms there are currently no known cases where coronavirus has been detected in farm animals.
There are approximately 140 fur farms in the Netherlands. Now that mink appear to be susceptible to the virus, there is a chance that the virus will be found on more farms. Mink farmers are obliged to report this to the Netherlands Food and Consumer Product Safety Authority.

2. Research on coronavirus in mink

Q. What is being researched at these farms?
A. Research is being conducted into the source of the infection and the transmission of the virus. It is important to know how the disease develops on the farm, as this provides knowledge about COVID-19 in animals and the transmission from human to animal and animal to animal.

Samples from sick animals are collected on the farms for testing.
Samples from healthy animals are also collected for antibodies, so that it becomes clear whether animals without symptoms can also be infected. The research is a collaboration between Utrecht University (UU), GD Animal Health, Erasmus MC and Wageningen Bioveterinary Research (WBVR).

Furthermore, any cats on the farm will be included in the study, as felines are also susceptible to SARS-CoV-2.

Q. Is there any research taking place in the immediate environment?
A. Although the virus is not expected to spread over long distances, air and dust samples are also taken in the vicinity of the company as a precaution to see whether the virus is also present here. Research will also be conducted on the manure.

The first results show that no virus was found in the air samples outside the farms. However, virus has been found in the immediate vicinity of mink on dust particles within the farms. It is not unknown that people can become infected with COVID-19 through these dust particles.

Q. What is the purpose of the research?
A. The research will gather knowledge about how the virus behaves in animals. This knowledge may also be important to find out more about the spread of the virus between people.

Q. Is there international coordination in this research?
A. The further research on mink farms will be carried out in accordance with internationally applicable standards. Research will be carried out with various institutes in the Netherlands, including Wageningen Bioveterinary Research, and also in cooperation with international partners when necessary.

3. Is there any danger to the environment?

Q. Are there risks for people in the vicinity of the infected farms?
A. It is plausible that the virus spreads in animals in the same way as it does between people via droplets in the air. All mink are housed indoors, making it unlikely that the virus will spread over greater distances.

As a precaution, air and dust samples were taken in the vicinity of the farm. Until the results of this research are known, it is

advised not to cycle or walk within a radius of about 400 metres around the infected mink farms.

Q. What is the situation for pets in the area?
A. Pets staying in the vicinity of the farm will be examined for coronavirus infection as much as possible.

Q. The outbreak is in the same area which experienced cases of Q fever and swine fever. Is this a coincidence?
A. This is an area with a great deal of livestock farming, especially of animals such as poultry, pigs and mink. Generally, these areas have more dust in the air. But we see no connection between this outbreak and previous outbreaks of other animal diseases, because these are very different diseases with different modes of transmission.

4. Other animals and coronavirus

Q. Which kept animals are susceptible to coronavirus?
A. Mustelids, which include mink, are susceptible to infection with coronavirus, as these animals have specific receptors on their cells that are affected by the virus.

Felines, hamsters and monkeys are susceptible for the same reason, as are bats, from which the virus originates in (10)(2e). For these animals, coronavirus can also be lethal, but the numbers are still small. Of the 20 or so infected cats worldwide, only one death has been reported.

There are a few cases of infected dogs worldwide, but they have few complaints.

Q. Is there cause for concern about coronavirus for livestock farming?
A. Unlike past cases of swine fever and Q fever, livestock are at little risk. Research shows that pigs are not sensitive to coronavirus, just like chickens. Mink therefore seem to be an exception.

Q. Will more livestock and other animals be tested now?
A. The Ministry of Agriculture, Nature and Food Quality intends to investigate the extent to which coronavirus occurs in pigs, cats and mink. Animals will be tested as part of that research.

Q. Why is there no requirement to report COVID-19 in mink?
A. The reporting of animal diseases is only required for a limited number of animals, and there must be a special reason for this. Because other animals used in livestock farming do not appear to be sensitive to SARS-CoV-2, only mink are now subject to compulsory notification.
Q. Can animals that now appear to be insensitive to the virus still get coronavirus?
A. Yes, they could. If the disease mutates, the virus could possibly infect other species. However, we have currently not seen any indications for this.

Q. What happens if coronavirus is found in farm animals in the Netherlands?
A. In the event that a livestock animal becomes infected with COVID-19, the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sport will jointly decide on the measures to be taken. Cooperation between the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sport will take place in accordance with the zoonosis crisis decision-making policy manual.

Q. Can cows and other animals still be put out to pasture?
A. There is currently no reason at all to keep animals indoors. Cows and other farm animals can simply go outside if this is in line with normal business operations.

5. Handling my animals

Q. I have symptoms of COVID-19. Should I stay away from my animals?
A. As a precaution, animal keepers infected with coronavirus are advised to keep contact with animals to a minimum and to let others take care of them. This applies to pet owners, but also to livestock farmers.

Q. I think that my animals might be infected with COVID-19. What should I do?
A. Sick animals of patients infected with or with symptoms of COVID-19 should stay inside as much as possible. This also applies to cats, which may infect each other, just like the lions and tigers in a New York zoo. Keep your distance from animals that show symptoms of disease and wear gloves when changing the litter box.

Q. What are the risks of coronavirus and zoonoses for/by intensive livestock farming?
A. Everywhere where people and animals live close together, there is a risk of zoonosis, so this also includes livestock and pets. The big difference between domesticated animals (both pets and livestock) and wild animals is that we have lived with the former for centuries and that a relatively limited number of animal species are involved. We have a great deal of knowledge about these animals and the pathogens they may be carrying. In addition, there are strict regulations and strict supervision of animal diseases with monitoring systems and, as soon as there are any signals, measures are taken, such as the outdoor ban on poultry in the event of avian influenza.

The coronavirus (SARS-CoV-2) that causes the disease COVID-19, is a virus that originates from wild animals. The number of species and the reservoir of potential pathogens is infinitely greater in wild animals, and we know much less about this. However, we are intervening in the habitat of wild animals in all kinds of ways, such as through mining and cutting down primeval forests, but aspects such as climate change also play a factor, as this causes animal habitats to shift. As a result, there are contacts

between animals that previously did not come into contact with each other and people come into contact with animals with whom they previously had no contact. In Europe, for example, the risk of diseases transmitted by mosquitoes is increasing due to climate change.

Q. Is there an influence of livestock farming and air pollution on the impact of corona on people?
A. Minister Carola Schouten asked the National Institute for Public Health and the Environment (RIVM) to investigate the possible influence of livestock farming and air pollution on the impact that corona has on people's health. In doing so, she responds to the calls of local politicians and mayors. RIVM submitted this request this week to the consortium Veehouderij en Gezondheid van Omwonenden (VGO), in which it collaborates with Utrecht University and Wageningen Bioveterinary Research (WBVR), among others.

Q. Is there anything I can do to prevent infection and transmission of the virus to my livestock farm?
A. Make sure you comply with the general hygiene rules, which also apply to preventing the introduction of animal diseases. Apply the hygiene measures when entering the animal enclosures; do not allow unnecessary visits to the farm, and ask someone else to care for the animals if you are a COVID-19 patient.

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[2] (10)(2a) reclassifies fur animals as domestic livestock
Date: Sun 10 May 2020
Source: Independent [edited]
<https://www.independent.co.uk/news/world/asia/coronavirus-fur-farm-china-mink-raccoon-fox-wild-animal-a9506976.html>

(10)(2a) is considering moves that would entrench its vast fur industry further into the country's economy, raising worries over the spread of coronavirus among animals crowded together in small spaces.

The country's agriculture ministry is proposing to reclassify mink, raccoon dogs, silver foxes and blue foxes as domestic livestock, rather than wild animals, which they are now.

Animal-welfare lobbyists say the change is to protect the industry from the global pressure to end the farming of wild species because of the coronavirus pandemic.

(10)(2a) breeds and kills more than 50 million animals on fur farms a year, according to Humane Society International, which has written to President Xi Jinping objecting to the plan during its consultation phase.

The industry was worth 389 billion yuan [USD 55 billion] in 2016, according to a (10)(2a) study.

The letter, seen by The Independent, points out that mink were recently found to be infected by Covid-19 at fur farms in the Netherlands, and raccoon dogs in a wildlife market in Shenzhen, (10)(2a) were found to have been infected with SARS, also a type of coronavirus.

It says animals that are crowded together in unhygienic, cruel and stressful conditions such as fur farms are more susceptible to viral infection, and these "appalling conditions" are found across all sectors of the wildlife trade.

The letter adds: "Ending the trade in wildlife for all purposes, including fur farming, medicine and the tourism/pet sectors would substantially reduce the risk of another pandemic."

A spokeswoman said: "The conditions on (10)(2a) fur farms are very similar to conditions observed in wildlife markets, and of course fur-bearing animals are also traded in wildlife markets. The fur trade represents an unacceptable risk considering the output is non-essential fashion."

(10)(2e) (10)(2e) of wildlife, said the reclassification was concerning. "Rebranding wildlife as livestock doesn't alter the fact that there are insurmountable challenges to keeping these species in commercial captive breeding environments, and that their welfare needs simply can't be met. In addition, there's clear evidence that some of these species can act as intermediate hosts of viruses, such as Covid-19, which is why we're urging governments around the world to stop trading in wildlife."

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[3] Cat tests positive, (10)(2a)
Date: Fri 8 May 2020
Source: Reuters [abridged, edited]
<https://www.reuters.com/article/us-health-coronavirus-spain-cat/spanish-cat-tests-positive-for-coronavirus-idUSKBN22K1TK>

A cat belonging to a family in the (10)(2a) region of (10)(2a) tested positive for the novel coronavirus, the professor who conducted an autopsy on the pet said on Friday [8 May 2020].

It did not die from the virus, however, but from a pre-existing respiratory condition fairly common among cats, said Professor (10)(2e) of (10)(2a) Animal Health Research Centre.

The cat, named (10)(2e), was the 6th feline to be detected with the disease globally.

It belonged to a household in the (10)(2a) area where several family members had caught the virus. It was tested for the infection in a post-mortem on 22 Apr 2020 and found to have a low charge.

"The vet who euthanised the cat realised that the animal presented a very grave respiratory pathology and feared it might suffer from COVID-19," Segales said.

(10)(2a) has said all available evidence suggests the novel coronavirus originated in animals, but it is not yet clear how the virus jumped the species barrier from an animal host, most likely a bat, to humans.

"The role of the pet in the epidemiology of COVID-19 could be considered negligible, with no evidence that anyone has caught it from a pet," Segales said. "This virus is extremely effective in person-to-person transmission, but animal-to-person transmissions are still very exceptional situations."

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[In case the diagnosis is officially confirmed, (10)(2e), the (10)(2a) cat, will become the world's 5th cat identified as naturally infected by SARS-CoV-2, following 4 earlier cases (10)(2a).
According to Dutch media, a surveillance in domestic cats owned by COVID-19-infected owners has been initiated in the Netherlands.
Results will be welcomed.

OIE Member Countries have been keeping the OIE updated on any COVID-19 related investigations or their outcomes in animals, as follows:
("Findings in animals," at
<https://www.oie.int/en/scientific-expertise/specific-information-and-recommendations/questions-and-answers-on-2019novel-coronavirus/>,
accessed 12 May 2020):

1. Animal surveillance in China: China update (5/02/2020).
<https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/China_update_COVID-19.pdf>
2. SARS-CoV-2 positive test results in dogs in Hong Kong: Follow-up report no.1 (09/03/2020), Follow-up report no. 2 (16/03/2020), Follow-up report no. 3 (23/03/2020).
<https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=33684>
3. SARS-CoV-2 positive test result in a cat in Belgium (28/03/2020)
<https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/Belgium_28.03.20.pdf>
4. SARS-CoV-2 positive test result in a in tiger (06/ 04/2020) and a lion (17/04/2020) in the USA
<https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?reportid=33885>
<https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?reportid=34054>
5. SARS-CoV-2 positive test result 2 domestic cats in the USA
(22/04/2020)
<https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?reportid=34086>
SARS-CoV-2 positive test result in a in 2 mink farms in The Netherlands (26/04/2020)
<https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/OIE_SARS_CoV%202_infection_of_mink_in_the_Netherlands_26April2020.pdf>
6. SARS-CoV-2 positive test result in a domestic cat in France
(02/05/2020) (This event has not been reported officially; <https://promedmail.org/promed-post/?id=http://promedmail.org/post/20200501.7289409>).
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HealthMap/ProMED maps available at:
North Brabant, Netherlands: <http://healthmap.org/promed/p/1250>
Catalonia, Spain: <http://healthmap.org/promed/p/1341>]

[See Also:
COVID-19 update (174): Netherlands (NB) animal, farmed mink, comment
http://promedmail.org/post/20200511.7323845
COVID-19 update (169): Netherlands (NB) animal, farmed mink, spread, rabbit susp
http://promedmail.org/post/20200509.7316646

COVID-19 update (154): Netherlands (NB) animal, farmed mink, research
http://promedmail.org/post/20200503.7294846
COVID-19 update (146): Netherlands (NB) animal, farmed mink, epidemiology http://promedmail.org/post/20200501.7286113
COVID-19 update (135): Netherlands (NB) animal, farmed mink
http://promedmail.org/post/20200427.7272289
COVID-19 update (146): Netherlands (NB) animal, farmed mink, epidemiology http://promedmail.org/post/20200501.7286113
COVID-19 update (143): USA (NY) animal, zoo, tiger, lion, tests
http://promedmail.org/post/20200430.7284183
COVID-19 update (141): India, animal, wild tiger, susp, clarification, RFI http://promedmail.org/post/20200430.7281768
COVID-19 update (138): India, animal, wild tiger, fatal
http://promedmail.org/post/20200428.7275765
COVID-19 update (135): Netherlands (NB) animal, farmed mink
http://promedmail.org/post/20200427.7272289
COVID-19 update (130): USA (NY) animal, zoo, tiger, lion, new cases
http://promedmail.org/post/20200425.7266556
COVID-19 update (124): USA (NY) animal, cat, lion, OIE
http://promedmail.org/post/20200423.7259119
COVID-19 update (123): USA (NY) animal, cat, conf
http://promedmail.org/post/20200422.7256272
COVID-19 update (113): USA (NY) cat, animal, susp, RFI
http://promedmail.org/post/20200418.7240811
COVID-19 update (88): Germany, animal, research, pig, chicken, bat, ferret http://promedmail.org/post/20200407.7196506
COVID-19 update (85): USA (NY) animal, tiger, OIE
http://promedmail.org/post/20200406.7191480
COVID-19 update (84): USA animal, tiger
http://promedmail.org/post/20200406.7191352
COVID-19 update (76): China (HU) animal, cat, owned, stray, seropositive http://promedmail.org/post/20200403.7179946
COVID-19 update (75): China (Hong Kong) animal, cat, OIE
http://promedmail.org/post/20200403.7179945
COVID-19 update (70): China (Hong Kong) animal, cat, pets & stock
http://promedmail.org/post/20200402.7173286
COVID-19 update (58): Belgium, animal, cat, clinical case, RFI
http://promedmail.org/post/20200327.7151215
COVID-19 update (56): China (Hong Kong) animal, dog, final serology positive http://promedmail.org/post/20200326.7146438
COVID-19 update (50): China (Hong Kong) animal, dog, 2nd case PCR positive, OIE
http://promedmail.org/post/20200323.7129951
COVID-19 update (45): China (Hong Kong) animal, dog, 2nd case PCR positive http://promedmail.org/post/20200319.7112693
COVID-19 update (37): China (Hong Kong) animal, dog, prelim. serology negative http://promedmail.org/post/20200312.7081842
COVID-19 update (30): China (Hong Kong) animal, dog, susp, serology pending http://promedmail.org/post/20200306.7057595
COVID-19 update (25): China (Hong Kong) animal, dog, susp, OIE
http://promedmail.org/post/20200302.7040373
COVID-19 update (22): companion animals, dog susp, RFI
http://promedmail.org/post/20200229.7036661
COVID-19 update (17): China, animal reservoir, wildlife trade & consumption http://promedmail.org/post/20200225.7024245
COVID-19 update (11): animal reservoir, intermediate hosts, pangolin susp http://promedmail.org/post/20200220.7009213
COVID-19 update (08): companion animals, RFI
http://promedmail.org/post/20200218.7002276
COVID-19 update (06): animal reservoir, intermediate hosts http://promedmail.org/post/20200217.6997782]
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