Interim SARS-CoV-2 Guidance and Recommendations for Farmed Mink and Other Mustelids[1]:

This guidance was developed collaboratively by the U.S. Department of Agriculture (USDA), U.S. Centers for Disease Control and Prevention (CDC), and state animal and public health partners using a One Health approach. This document is intended to provide the most up to date information related to SARS-CoV-2 and farmed mink and other mustelids and guidance related to SARS-CoV-2 prevention and control strategies for public and animal health officials and partners in the mink industry.

Q: What is a mink?

A: A mink belongs to the taxonomic order Carnivora, which means it is carnivorous – a meat-eater. The order, Carnivora, includes other meat-eaters, such as lions, tigers, hyenas, coyotes, and wolves. Within the order, Carnivora, the mink belongs to the family Mustelid, commonly known as the weasel family. This family includes ferrets, skunks, otters, fishers, martens, and wolverines.

Q: What do we currently know about mink and COVID-19?

A: SARS-CoV-2, the virus that causes COVID-19, was recently detected in mink on multiple farms in the Netherlands. The mink showed various respiratory (lung) and gastrointestinal signs (gut); the farms also experienced increased death loss[2]. Investigations have been launched to find out the source of the infections. Because some employees had symptoms of COVID-19, it is assumed that the farm workers were also infected and likely the source of the mink infections.

Recent research shows that ferrets (which are closely related to mink) can be experimentally infected with SARS-CoV-2 and can spread the virus to other ferrets in laboratory settings. The study did not investigate whether animals can spread infection to people.

Q: What are the clinical signs of SARS-CoV-2 infection in mink or other mustelids?

A: Dutch officials reported respiratory and gastrointestinal signs in the sick mink. Recent research also showed that in a laboratory setting, ferrets that were experimentally infected with SARS-CoV-2 exhibited fever, mild respiratory, and gastrointestinal signs.

Q: What should I do if I suspect mink or other mustelids on my farm are infected with the SARS-CoV-2 virus?

A: Any producer or veterinarian who suspects mink or mustelids (or other animals residing on the premises) to be infected with SARS-CoV-2 virus[3] should contact their State Animal Health Official (SAHO) immediately. The SAHO will engage the Animal and Plant Health Inspection Service (APHIS) Area Veterinarian in Charge (AVIC), State Public Health Veterinarian (SPHV), and/or national animal health and public health officials to decide whether testing is warranted.

Q. How will animal samples be collected and tested?

A: The SAHO and USDA AVIC will initiate the investigation, specimen collection and testing. State animal health laboratories can conduct animal testing, but any positive samples need to be confirmed through additional testing by USDA's National Veterinary Services Laboratories (NVSL).

[1]Note: Additional guidance on ferrets and other small non-traditional companion animals is forthcoming
[2]Increased death loss means losses above those expected during production
[3]Other common causes of respiratory and/or gastrointestinal disease and increased death loss should be ruled out first

Q: What will happen if mink or mustelids test positive for SARS-CoV-2 virus?

A: The SAHO and USDA AVIC will initiate animal disease response activities. Animal health and public health officials (including the State Public Health Veterinarian) should collaborate using a One Health approach to conduct epidemiological investigations into animal and human infections with SARS-CoV-2 to protect animal and human health.

Q: Can people get COVID-19 from mink or other mustelids?

A: We are still learning about SARS-CoV-2 in animals, but there is currently no evidence that animals, including mink or other mustelids, play a significant role in spreading the virus to humans. Based on the limited information available to date, the risk of animals spreading SARS-CoV-2 to people is considered to be low.

The primary route of transmission of SARS-CoV-2 is from person to person: between people who are in close contact with one another (within six feet) or through respiratory droplets produced when an infected person coughs, sneezes, or talks. Airborne transmission over long distances is unlikely. It may also be possible that a person can get COVID-19 by touching a contaminated surface or object that has the virus on it, and then touching their own mouth, nose, or eyes. This is not thought to be the main way the virus spreads. People can spread the virus to other people, as well as animals, before they show symptoms, or even if they do not have any symptoms.

Further studies are needed to understand if and how different animals could be affected by the virus that causes COVID-19 and the role animals may play in the spread of the virus.

Q: How can I protect people and animals on my farm from becoming infected with the SARS-CoV-2 virus?

A: To ensure the health and safety of animals and people on your farm, follow state and industry biosecurity and safety guidance.

Biosecurity is a series of management practices designed to reduce the risk of disease agents being introduced and spread on the farm. In broad terms, it refers to anything designed to prevent the transfer of disease-causing pathogens. Biosecurity is crucial to control and contain a disease such as COVID-19, as well as in the daily management practices protecting the health of farm workers and animals. To be effective, biosecurity measures need to be disease-specific, as well as site-specific.

Steps you can take to reduce the risk of SARS-CoV-2 transmission include:

- **Restricted access to the premises and buildings where production animals are kept**.
    - Limit access to essential personnel only.
    - Limit non-production animal access, and implement measures to exclude domestic pets, rodents, birds, and other wildlife from buildings.
- **All employees should stay home if they are sick.** Encouraging farm workers and supervisors not to come to work if they are experiencing symptoms consistent with COVID-19 and to take steps to help prevent the spread of the virus.
    - Employees who have symptoms upon arrival at work or who become sick during the day should immediately be separated from other employees, customers, and visitors, and sent home.

    - Employees should not return to work until the criteria to discontinue home isolation are met, after talking with their doctor.
    - Implement sick leave policies that are flexible, nonpunitive, and consistent with public health guidance, allowing employees to stay home if they have symptoms of respiratory infection.
- **Increase distance between workers**. Whenever possible, mink farm workers should maintain 6 feet of distance between each other. Adjustments should be made to allow for social distancing and avoid groups of workers when clocking in or out, during breaks, or in locker/changing rooms, or other shared spaces.
- Mink farm employers should put in place engineering controls (e.g., physical partitions or barriers between workers within 6 feet of each other) and administrative controls (e.g., stagger workers' arrival and departure times to avoid clusters of workers in parking areas, locker rooms, and near time clocks) to separate and distance employees as a top priority and main way to prevent the spread of COVID-19.
- **Encourage employees to use cloth face coverings**. Wearing a cloth face covering does NOT replace the need to practice social distancing.
    - Cloth face coverings may prevent people, including those who are unaware they have the virus, from spreading it to others, but they may not protect the wearer from exposure to the virus. Cloth face coverings do not function the same way as personal protective equipment (PPE) such as a respirator.
    - Workers can wear a cloth face covering when their employer has determined in their hazard assessment that a respirator or disposable medical facemask (such as a surgical mask) worn to protect the worker is not required.
    - If cloth face coverings are worn in these facilities, employers should provide readily available clean cloth face coverings (or disposable facemask options) for workers to use when the coverings become wet, soiled, or otherwise visibly contaminated.
- **Limit duration of contact among coworkers**. Continued close contact with potentially infectious individuals increases the risk of SARS-CoV-2 spread.
- **Encourage proper hand hygiene and provide employees with what they need to clean their hands.** This is an important infection control measure. Encourage employees to wash their hands regularly with soap and water for at least 20 seconds. An alcohol-based hand sanitizer containing at least 60% alcohol can be used, but not as a substitute for cleaning hands with soap and water. If hands are visibly dirty, always wash hands with soap and water before using alcohol-based hand sanitizer.
- **Clean and disinfect frequently touched surfaces** such as tools, workstations, and shared spaces such as break room tables, locker rooms, and entrances/exits to the facility on a routine basis. Put in place practical biosecurity practices on the farm, including having dedicated boot disinfecting stations between farm areas. To disinfect, use products that meet EPA's criteria for use against SARS-CoV-2, diluted household bleach solutions prepared according to the manufacturer's label for disinfection, or alcohol solutions with at least 60% alcohol, and are appropriate for the surface. Follow manufacturer's directions for proper use and recommended PPE.
- Additional recommendations are described in the U.S. Department of Labor and U.S. Department of Health and Human Service's booklet Guidance on Preparing Workplaces for

COVID-19, as well as CDC's Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 (COVID-19).

Q: Should I screen workers on my farm?

A: Workplaces, particularly in areas where community transmission of COVID-19 is ongoing, can consider developing and implementing a comprehensive screening and monitoring strategy aimed at preventing the introduction of COVID-19 into the worksite. Consider a strategy that includes:

1) **Conducting daily health checks** (e.g., symptom and/or temperature screening) of employees before they enter the facility, following the guidance of the state and local public health authorities and your occupational health services.
   - If doing health checks, conduct them safely and respectfully (employers may use the "Should we be screening employees for COVID-19 symptoms" section of General Business Frequently Asked Questions as a guide).
   - Complete the health checks in a way that avoids employees being together in large crowds; consider providing multiple screening entry points into the building.
   - To prevent stigma and discrimination in the workplace, do not assume risk based on race or country of origin and be sure to maintain the confidentiality of people with confirmed COVID-19.
2) **Follow the criteria for return to work of exposed and recovered** persons, for those who had signs or symptoms of COVID-19 but have recovered.
   a. Employees should not return to work until they meet the criteria to discontinue home isolation and have consulted with a healthcare provider.
3) **Criteria for exclusion of sick workers.**

CDC's Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 (COVID-19) provides detailed recommendations for each of these three points and can be adapted for your mink farm setting. Refer specifically to the subsections: *"Prevent and Reduce Transmission among Employees."*

Q: How can I educate and train workers and supervisors about ways that they can reduce the spread of COVID-19?

A: Supplement workers' normal and required job training the Occupational Safety and Health Administration (OSHA) standards, with additional training and information about COVID-19, recognizing signs and symptoms of infection, and ways to prevent exposure to the virus. Training should include information about how to put in place the various infection prevention and control measures recommended here, and they should be included in any infection prevention and control or COVID-19 response plan that an employer develops. OSHA provides additional information about training on its COVID-19 webpage.

All communication and training should be easy to understand and should (1) be provided in languages appropriate to the preferred languages spoken or read by the workers, if possible; (2) be at the appropriate literacy level; and (3) include accurate and timely information about:

- Signs and symptoms of COVID-19, how it spreads, risks for workplace exposures, and how workers can protect themselves;
- Proper handwashing practices and use of hand sanitizer stations;

- Cough and sneeze etiquette;
- Other routine infection control precautions (e.g., safe practices for how to put on (don) and take off (doff) PPE, cloth face coverings, and social distancing).

Employers should place simple posters in appropriate languages for their employees that encourage staying home when sick, cough and sneeze etiquette, and proper hand hygiene practices. They should place these posters at the entrance to the workplace and in break areas, locker rooms, and other workplace areas where they are likely to be seen.

Other guidance provides additional details for recommendations in the subsection "*Educate workers about steps they can take to protect themselves at work and at home."*

Q: What precautions should mink farm workers take around sick animals?

A: Based on the limited information available to date, the risk of animals spreading SARS-CoV-2 to people is thought to be low. However, because we do not know a lot about COVID-19 and animals, the PPE guidelines use a cautious approach. Recommendations may change over time, as new information becomes available.

- Minimize contact with sick or dead animals. If animals appear to be sick, wear gloves, face mask, and goggles or face shield when working with or near sick animals.
    - If an animal is suspected to have or tests positive for SARS-CoV-2, the animal should be immediately isolated from other animals. The number of people interacting with these animals should be kept to a minimum. Staff that must have contact with these animals should wear respiratory protection (e.g. N95) instead of a facemask. Staff at higher risk for severe illness from COVID-19 should not work with animals suspected or confirmed to be infected with SARS-CoV-2.
- Always immediately wash your hands with soap and water for at least 20 seconds after:
    - You have direct contact with animals, their food, or supplies, waste/feces.
    - Cleaning up after animals, including any body fluids or waste.
    - Leaving areas where animals are housed, even if you did not touch an animal.
    - Removing PPE or cloth face covering.
- Use a surgical mask and eye protection (e.g., goggles or a face shield) whenever splashes, or sprays are likely to occur. Do not use compressed air and/or water under pressure for cleaning, or any other methods that might aerosolize (spray into the air) infectious material. PPE may be needed when cleaning or disinfecting a potentially SARS-CoV-2 contaminated area; follow the cleaning or disinfectant product manufacturer's instructions for use. Follow recommendations for safe practices for how to put on (don) and take off (doff) PPE.
- **If there is a breach in PPE or other accidental direct contact with a sick animal or its urine, feces, blood, saliva, or vomit on exposed skin**, a supervisor should be immediately notified, and the exposed area should be immediately washed with soap and warm water for at least 20 seconds. If soap and water are not immediately available, use an alcohol-based hand sanitizer (at least 60% alcohol content) on skin. If hands are visibly dirty, always wash hands with soap and water before using alcohol-based hand sanitizer. If an employee has an exposure to their mucous membranes (e.g. eyes, inside of nose, or mouth), the area that was exposed should be flushed with only water. Do not use soap or hand sanitizer to wash the eyes, inside of nose, or mouth.

- **If a farm worker receives a bite, scratch or, abrasion** from an animal, animal product, or an object contaminated by an animal: wash the exposed area of skin immediately with soap and warm water for at least 20 seconds, immediately alert the supervisor, and contact a health care provider.
- **If there are people exposed to sick animals or sick people**, the exposed person may need to self-monitor for temperature or symptoms for a period of 14 days post-incident. See CDC Coronavirus Self-Checker for additional guidance on symptom monitoring.

Q: What precautions should mink farm workers take around healthy animals?

A: When interacting with healthy mink or other animals, use the same precautions as you would when interacting with other people: maintain social distance (6 feet, or 2 meters) when possible, minimize any close contact, and wear cloth face coverings when feasible.

Q: Where can I get more information on carcass disposal?

A: Carcasses from COVID-19 positive, suspected, or exposed animals should be disposed of in compliance with all Federal, State, and local regulations. Additional information about State requirements for carcass disposal is available on the Veterinary Compliance Assistance Web site. APHIS, upon request, can provide technical support and guidance to assist in identifying and implementing a local disposal plan.

- Carcasses must be carefully transported to the approved disposal site to prevent contaminated material from escaping the transport vehicles. All vehicles should be cleaned and disinfected after each use.
- Onsite composting, onsite burial, incineration, landfill, and rendering, or a combination of these methods, are generally the most suitable options.
- For more information, visit the APHIS Carcass Management Dashboard at https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/emergency-management/carcass-management/carcass

Q: What precautions should I take around animal carcasses or pelts?

A: Because mink processing procedures have the potential to spread other zoonotic diseases to the worker, the following precautions should always be taken when handling carcasses or during pelting:

- Use face shield or a facemask and eye protection (e.g. goggles or face shield) whenever splashes or sprays are likely to occur.
- If participating in aerosol-generating procedures (e.g., whelping, pelting, rendering), consider wearing a face shield or goggles, gloves, protective outerwear, and respiratory protection that is at least as protective as a fit-tested NIOSH-certified disposable N95 filtering face piece respirator.
    - If an N95 respirator is not available, use a combination of a surgical mask and a face shield that covers the entire front (that extends to the chin or below) and sides of the face
    - Respirator use should be in the context of a complete respiratory protection program in accordance with OSHA Respiratory Protection standard (29 CFR 1910.134), which includes medical evaluations, training, and fit testing.

- Wear gloves and other protective outerwear as needed to avoid bare-skinned contact with animal carcasses, organs, bodily fluids, and pelts.
- Always immediately wash your hands with soap and water for at least 20 seconds after:
    - Experiencing inadvertent direct contact with animal carcasses, organs, and pelts;
    - Cleaning up after animals, including any body fluids or waste;
    - Removing PPE or cloth face covering.
- Clean tools with reusable gloves and appropriate disinfectant. To disinfect, use products that meet EPA's criteria for use against SARS-CoV-2, diluted household bleach solutions prepared according to the manufacturer's label for disinfection, or alcohol solutions with at least 60% alcohol, and are appropriate for the surface. Follow manufacturer's directions for use.