

SPECIAL ARTICLE

# THE ONGOING COVID -19 PANDEMIC AND ANIMALS: AN APPRAISAL



**Dr. M. K. Sudarshan\***

Founder President and Mentor, APCRI and Chairman, Karnataka State Covid-19  
Technical Advisory Committee, Arogya Soudha, Bangalore

In December, 2019, the Covid -19 pandemic, caused by SARS Cov-2 virus, originated from Wuhan, China, supposedly from a live animal market, as a zoonotic disease. It soon spread to humans, travelled and affected 218 countries. Till date ( as on 16th January, 2021) globally there were 9, 25, 06,811 cases and 20, 01,773 deaths from Covid -19. Now after about one year the concern is its reverse transmission from humans to animals' i.e. Zooanthroponosis or reverse zoonosis. In this regard on 8th January, 2021, the Food and Agriculture Organization (FAO) has released an advisory (1) and a summary of it is given below.

The current spread of the COVID-19 pandemic is primarily due to human-to-human transmission. Infection of susceptible animal species with SARS-CoV-2 has occurred mostly after they were in contact with infected humans, with or without signs of disease. As such, infections in animals have generally been found through contact tracing following confirmation of COVID- 19 in human cases.

The susceptibility of different animals is categorised as follows and it is also based on experimentally infecting the animals, etc.

## 1. Farm animals.

1.1. Highly susceptible. Minks can be infected with the virus. When infected, they may show clinical signs such as respiratory signs, gastrointestinal signs, increased mortality, but more frequently infection may not cause any signs of disease at all. Infected humans have introduced the virus into mink farms in several countries. Onward mink-to-mink as well as mink-to-human transmission have been seen on farms in Denmark and the Netherlands. There

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\***Corresponding Author:** Dr. M.K. Sudarshan, Founder President and Mentor, APCRI and Chairman, Karnataka State Covid-19 Technical Advisory Committee, Arogya Soudha, Bangalore -560023 [Email: mksudarshan@gmail.com]

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is evidence from Denmark that SARS-CoV-2 has genetically evolved in mink into a new variant virus strain that was then reintroduced into humans.

Ferrets, raccoon dogs and rabbits could be infected with the virus. The ferrets showed that they could transmit the infection to other ferrets where as in case of raccoon dogs and rabbits the virus transmissibility is still not clear.

1.2. Low susceptible. Pigs showed mild respiratory signs where as cattle showed no respiratory signs.

1.3. Not susceptible: Chickens, turkeys, quail, geese, ducks and fish (both farmed and free roaming) could not be infected with the virus.

## 2. Companion animals (often found on farms)

2.1. Susceptible: Cats can be infected with the virus and can develop respiratory and/or gastrointestinal signs. An experimental study has shown that infected cats can transmit the virus to other cats. Evidence to date suggests that cats become infected through contact with COVID-19 human cases, either in household settings or zoos (big cats). In addition, in the Netherlands cats roaming on mink farms were tested positive for SARS-CoV-2.

Dogs can be infected with the virus; they can show signs of disease but have not transmitted the disease to other dogs they were in contact with in laboratory settings. The evidence to date indicates that dogs become infected through contact with humans with COVID-19.

However, if the above susceptible domestic animals come in contact with Covid -19 person/patient such animals should not be abandoned, rejected or killed without a proper risk assessment done by veterinary authorities.

Lastly, as Covid-19 pandemic is still raging in India it is important that persons (Covid -19 exposed) in home quarantine or home isolation (Covid-19 infected) shall keep away from the susceptible animals till they are declared fit and not infective.

### Reference:

1. *Food and Agriculture Organisation (FAO), 2021. COVID-19 and animals: Information on risk mitigation measures for livestock and agricultural professionals. Jan.8, 2021 Rome, Italy <https://doi.org/10.4060/cb2549> en*