

How Livestock and Wildlife Contribute in Spreading of the Emerging Viral Diseases

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Viral diseases are responsible to pose significant threat to livestock and human beings globally. There are few viruses which remain endemic especially in developing and low income countries, leading to severe economic losses [1,2]. In the last few decades mankind has faced many emerging and re-emerging viruses. Literature has reported so many zoonotic viruses including Crimean Congo hemorrhagic fever (CCHF), West Nile, Nipah, middle east respiratory syndrome, influenza, Ebola, severe acute respiratory syndrome coronavirus, monkey pox and many others [3].

Numerous domestic and wild animals including cattle, sheep, camels, goats and hares are responsible for spreading CCHF. These animals act as amplifying host for the pathogen and can transmit the virus to the humans who come into contact with any secretion of the infected animals or are bitten by the infected adult tick [4]. On the other hand, influenza virus infects not only humans, but also birds including poultry which as a result impacts the global food security significantly. H5N1 has been detected in milk products which is a new possibility to transmit the viral infection to humans [5].

West Nile virus, a mosquito borne infection, is responsible for large epidemics around the globe. Birds act as their amplifying host and the disease can be transmitted to humans which could be subclinical and it can also lead to fatal meningoencephalitis [6]. Another virus named middle east respiratory syndrome virus (MERS) is also transmitted from camels to humans handling with them. So strict preventive measures should be taken to avoid the spread of such diseases. As MERS cause an infection which could be asymptomatic and in severe cases it can cause pneumonia and can also lead to multi-organ failure [7].

Ebola virus a highly pathogenic organism infects humans who come in contact with the animal carcass or with the bat reservoir. It can also be further transmitted from person to person contact. As the disease progress the infected individual has to face the respiratory as well as neurological manifestations [8].

Nipah Virus, a bat borne pathogen, has caused an outbreaks in different regions of the world. This virus once infects human is also responsible to cause respiratory problems and neurological issues. Its human-to-human transmission has also been reported [9].

It is concluded that the emerging and re-emerging viral diseases can lead to a new pandemic. To mitigate this threat, there should be proper mechanisms for handling the infected animals. Disease free zones should be created to avoid the unexpected situations like the world has faced recently in 2020 during a pandemic caused by SARS-CoV-2. Furthermore, raising awareness among the animal handlers would be fruitful to avoid the unpredictable future problems and to safeguard the global health.

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