

1. New scientific research claims that camels are the source of Middle East Respiratory Syndrome coronavirus (MERS-CoV). Does FAO agree with these findings? Why are they important?

It is important to be clear about the precise findings of the study. The research does not claim camels are the source of the virus that has been affecting humans. Rather, the study found that camels (in areas where human cases have not yet been reported) carry antibodies to MERS-CoV. In some cases, these camels have been isolated from other camels for many years. This suggests that the virus that has caused that antibody response is not new to those camels. FAO concurs with the researcher's conclusion that the antibody findings in camels indicate that a virus similar or closely related to the MERS-CoV occurs in some camels. This may provide useful in determining how humans come to be infected.

2. The study cites positive samples from camels in Oman and the Canary Islands. Does this mean these specific countries play a significant role? What role do other countries play?

No cases of human infection have been reported from Oman or the Canary Islands. The study did not test camels beyond these two countries. The study made use of readily available samples. This data is not sufficient to suggest the countries in question play any role in the current situation. More analysis and surveillance is required before understanding the geographical situation in respect to the current virus.

3. If camels are the source of the virus, can other hosts, like bats, be ruled out?

Current knowledge of MER-CoV is incomplete. In light of this, FAO and its collaborating partners – the World Health Organization (WHO) and the World Organisation for Animal Health (OIE) – are considering a range of possible sources. FAO and its partners do not wish to exclude any potential sources at this stage. FAO believes an in-depth and carefully planned investigation needs to be carried out to ensure that all reasonable possibilities are considered.

4. Why is it important to find the source? What does it mean?

It is important to not only identify the sources of emerging infections, but it is also important to appreciate the means by which pathogens spill over into humans and spread between animals. Better understanding of virus sources and methods of spread can be employed to help people and animals avoid exposure. This knowledge can also be used to design methods to better control diseases and reduce the risks that viruses pose to health and trade. Understanding the source can help in the design of methods to protect the safety and livelihoods of livestock/animal holders.

5. If more research is needed to get clarity about the virus, what should scientists be looking for exactly?

Using modern techniques, the isolation of viruses allows scientists to collect a wealth of information about the genetic makeup of the viruses in question. This information can provide evidence concerning where the infection may have risen. Future investigations will need to focus on isolating the viruses, and also focus on their comparison.

6. Do countries have sufficient infrastructure to carry out virus research?

FAO stands ready to work with and assist any member country, upon request, in developing the capacities required to conduct field and laboratory investigations. In addition, FAO operates numerous reference centres around the world. Through these centres, FAO can provide expert services depending on the needs of a country or region.

7. What are the precautionary measures FAO recommends to consumers and producers to protect themselves against the virus?

At this point in time, FAO does not have any specific information about disease exposure. FAO recommends people follow best practices commonly employed in the preparation or consumption of foods (e.g. clean surfaces, clean knives/spoons during food preparation, hand washing, thoroughly cooking meats and pasteurization of dairy products). Such measures will protect against a wide range of diseases; they are not specific to MERS-CoV.

8. Do camels present a risk to humans?

The connection between human disease and camels is extremely low, given the current evidence. If camels were affected by MERS-CoV, the mechanism of virus transmission would require further clarification. Given the current information available, if camels could infect humans, long-term or repeated and specific exposures would seem to be required.

9. What are the countries with the biggest camel population?

Camels are widely spread through the world and serve important economic, livelihood, nutritional and social purposes. They are used as draft animals, and for dairy and meat production. They are also used in ceremonial and racing events. Dromedaries occur mainly in arid areas, and high populations occur in the Horn of Africa. FAO and its partners have long supported camel-related livelihoods as an important resource for vulnerable populations.

Countries with the largest camel populations are: Somalia, Sudan, Kenya and Niger, in that order.(source, FAOSTAT)

10. What has FAO done since the first human MERS-CoV case has been detected, and what is FAO planning next?

FAO has been working through its network of offices around the world and in close collaboration with WHO and OIE. As part of normal preparedness measures, FAO and its partners have been planning for the provisioning of expert advice and technical assistance upon the request of countries responding to the emergence of the disease should animal populations be considered involved.