

Current Event

Camels and MERS

Ministry of Health (MoH) continues its collaboration with the Ministry of Agriculture (MoA) to prevent further spread of MERS.

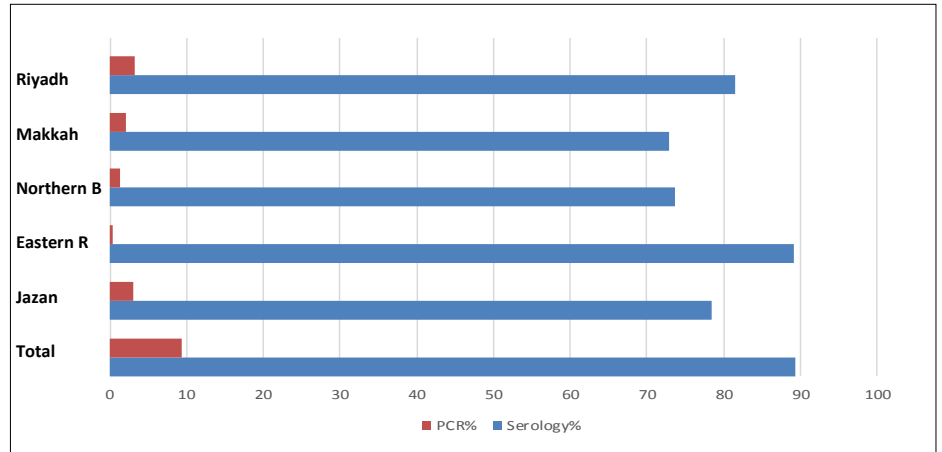
Editorial Notes

Camels in Saudi Arabia are being farmed for their milk, meat, racing, and for other social purposes. Camels had been infected with coronaviruses for decades in Africa, but the Middle East Respiratory Syndrome (MERS) emerged only in 2012. The international camel trade running between the Horn of Africa and the Arabian Peninsula would have provided ample opportunity for the virus to spread across countries. Camels are either serologically positive or negative; negative camels would increase the pool of susceptible for MERS. A study found that more than 80% of animals became infected by the age of two years; and virus shedding was more common in calves than in adults. Active virus infection was observed far more frequently in animals less than two years old. Approximately 3% of camels in Saudi Arabia shed MERS-CoV (Figure 1).

It is still not fully understood how the MERS coronavirus spreads to humans. Transmission of the virus is not airborne; quite a large dose of the virus is needed to cause an infection. The virus probably passes to humans through direct contact with shedding camels. Infection might also occur through the ingestion of contaminated un-pasteurized milk, not well cooked meat. Generally, unknown sources of meats and milk could contribute in human infection with many zoonotic diseases including MERS.

Some researchers argue that simple changes in animal husbandry, like zero

Figure 1: Infection of Camels with MERS-CoV in Saudi Arabia



Source: MoA, Saudi Arabia

Cases of MERS-CoV: International Week (IW) No. 7: 14 – 20 Feb 2016

Total	5
Symptomatic (S)	4
Asymptomatic (AS)	1
Healthcare worker (S)	0
Healthcare Worker (AS)	1

grazing and changing camel to companion animal instead of grazing animal is likely increase the chances of disease spread. A study conducted by the MoA showed that the rate of infection in camels reared in intensive system were significantly higher than free grazing camels and shed MERS-CoV more frequently.

The Saudi MoA recommends breeders and camel owners to take preventive measures against intimate contact with camels. MoA posted on a number of health measures that must be adhered to, including: not to approach camels more than needed with necessary health precautions such as: wearing respiratory protective masks and gloves when dealing with camels, washing hands with soap before and after touching camels (especially when dealing with calving, diseased or dead camels). MoH and MoA has prepared a set of health educational materials to be widely distributed throughout the kingdom.

Recent Publications:

Gossner C, Danielson N, Gervelmeyer A, Berthe F, Faye B, Kaasik Aaslav K, Adlhoeh C, Zeller H, Penttinen P, Coulombier D. Human-Dromedary Camel Interactions and the Risk of Acquiring Zoonotic Middle East Respiratory Syndrome Coronavirus Infection. *Zoonoses Public Health*. 2016 Feb;63(1):1-9. doi: 10.1111/zph.12171. Epub 2014 Dec 27.

MERS-CoV in KSA 2016*

Region	Case	Primary	Secondary	U.C.
Riyadh (5)	8	5	2	1
Al-Ahsaa	0	0	0	0
Eastern Region	0	0	0	0
Jeddah	3	3	0	0
Qassim	1	1	0	0
Najran	0	0	0	0
Taif	1	1	0	0
Madinah	1	1	0	0
Asir	0	0	0	0
Tabuk	0	0	0	0
Makkah	0	0	0	0
Hail	0	0	0	0
Al-Joaf	0	0	0	0
Jazan	0	0	0	0
Northern Borders	0	0	0	0
Qunfotha	0	0	0	0
Al-Baha	0	0	0	0
Bisha	1	1	0	0
Hafr Al-Batin	0	0	0	0
Qurayyat	0	0	0	0
Total	16	13	2	1

Case: Confirmed Symptomatic. U.C.: Unclassified cases

*Period: Form 3 Jan to 20 Feb 2016

Regions with new cases of this week are highlighted in yellow.