

RIFT VALLEY FEVER



What is Rift Valley Fever (RVF)?

Rift Valley fever (RVF) is an acute viral disease that can cause severe disease in domestic animals (such as buffalo, camels, cattle, goats and sheep) and humans. Disease in these species is characterized by fever, severe illness, abortions, and a high morbidity and mortality rate. The virus which causes RVF belongs to the genus Phlebovirus in the family Bunyaviridae.

When does the disease outbreaks occur??

Outbreaks of RVF are associated with persistent heavy rainfall, with sustained flooding and the appearance of large numbers of mosquitoes, the main vector

Localised heavy rainfall is seldom sufficient to create conditions for an outbreak; the simultaneous emergence of large numbers of first generation transovarially infected (virus infected mosquitoes will lay infected eggs which will in turn result in a new generation of virus infected mosquitoes) mosquitoes is also required.

After virus amplification in vertebrates, mosquitoes act as secondary vectors to sustain the epidemic. For epidemics to occur, three factors must be present:

- i) The pre-existence or introduction of the virus in the area;
- ii) The presence of large populations of susceptible ruminants; and
- iii) Climatic or environmental conditions that encourage a massive build-up in the vector mosquito population. The latter usually

How is the disease transmitted and spread?

Many different spe Mosquitoes will feed on viraemic (virus circulating in the bloodstream) animals and then transmit the virus to other animalson which they subsequently feed. Some species of mosquitoes (Aedes, for example) are capable of transmitting the virus from infected female mosquitoes to offspring via its eggs. This contributes to the survival of the virus in the environment. Mosquito eggs may survive during prolonged periods (up to several years) in dry conditions. During periods of high rainfall and/or flooding the eggs hatch and there is an increase in the infection of animals on which these mosquitoes feed.

What is the public health risk associated with this disease?

RVF is a zoonosis (a disease which primarily affects animals, but causes disease in humans). Humans are highly susceptible to the RVF virus and may become infected with RVF by being bitten by infected mosquitoes, through contact with blood, other body fluids or tissues during killing, skinning and cutting of infected animals, or by consumption of raw milk or uncooked meat from infected animals. Humans working in slaughter facilities, laboratories or hospitals are at risk of acquiring infections

What are the clinical signs ofthe disease?

Animals: Clinical signs depend on the species of animal affected and conditions such as age and pregnancy. During epidemics the occurrence of numerous abortions and mortalities among young animals, together with disease in humans, is characteristic. Pregnant sheep and cattle affected by this disease will almost always abort (80-100%). Young lambs and calves develop a fever, become weak and die very suddenly. Adult sheep and cattle may have nasal discharge, excess salivation, and loss of appetite, weakness, or diarrhea.

Humans: People with RVF will either show no symptoms or develop a mild illness. Signs of illness include fever, weakness, myalgia (muscle pain), back ache, dizziness, liver abnormalities, and weight loss. In some patients, the illness can progress to haemorrhagic fever, encephalitis (inflammation of the brain), or ocular disease (inflammation of the eye, blindness). Severe complications develop in 1-4% of cases though most people recover within four to seven days. Approximately one per cent (1%) of humans infected with Rift Valley fever dies of the disease.

How is the disease prevented and controlled?

There is no treatment!

Rift Valley Fever is a notifiable disease (suspicion of the disease must be reported to the State Veterinary Services)

Farmers are advised to vaccinate their animals against RVF yearly before the start of the rainy season.

The modified-live vaccine, produced by the Onderstepoort Biological Products (Ltd) (OBP) at Onderstepoort, can only be used in non-pregnant animals.

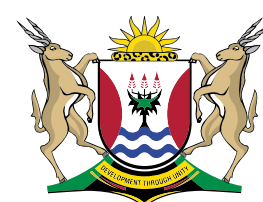
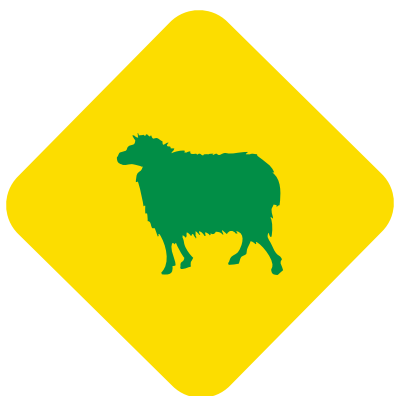
The inactivated or dead vaccine, also produced by the OBP, must be used in pregnant animals, as the live vaccine can cause abortions.

A private veterinarian or state veterinarian or Animal Health Technician should be contacted for the correct vaccination procedure during an outbreak.

Animals should also be moved from low-lying areas to higher altitudes. Where possible, animals should be stabled in mosquito-proof facilities

The general public is urged not to handle any sick animals or cut up any dead animals or aborted foetuses and to contact their nearest veterinarian, should abortions in a herd be observed.

Anyone handling the carcasses should be wearing protective clothes and goggles.



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