Peste des Petits Ruminants (PPR)

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FREQUENTLY ASKED QUESTIONS

1. Which wild ruminant species are susceptible and develop infection or disease?

The disease has been reported in wild captive ruminants and include Dorcas gazelle, Thompson’s gazelle, Nubian Ibex, Laristan sheep, gemsbok, Indian buffalo, African grey duiker, Arabian oryx, Bubal hartebeest, African buffalo, Defassa waterbuck, kobs, Arabian mountain gazelles, springbuck, Barbary sheep, bushbuck, impala and Rheem gazelle.

2. Does any long or intermediate carrier state develop in wildlife?

This is unlikely given the characteristics of members of the family Paramyxoviridae and the fact that this phenomenon has not been described in livestock. It is currently well accepted that PPRV is unable to sustain itself in wildlife. There is currently no reason to believe that PPRV circulates in wild animals and acts as a potential source of virus for domestic species.

3. If there is no carrier state, how does this virus survive during the inter-epidemic period?

The virus requires close contact between shedding and susceptible animals and is most likely maintained in nature by mild or subclinical infections that continue throughout the year in low numbers of animals. It is possible that diminished virulence may help to sustain the virus, even in an extensive population.

4. Is the current PPR vaccine safe and efficacious to use in our range of wild ruminants?

PPR vaccines have not been tested for safety and efficacy in wild ruminants. There is therefore some risk of adverse effects when using modified-live PPR vaccines in such species.
5. How sensitive and specific are the current ELISA tests for PPR in livestock for various African wildlife species?

The validity of the tests was never designed for a wide range of species but competitive ELISA is theoretically robust across species. The evidence from the rinderpest wildlife work was that the ELISA test for rinderpest and PPR were very specific but lacked sensitivity when compared to the gold standard virus neutralization (VN) test. Overall they are good tests but should be used sensibly and with VN backup if there is any doubt about the validity of the results.

6. How big is the risk that PPR may enter South Africa?

Only Mozambique, Zambia, Zimbabwe and Namibia stands between South Africa and other infected SADC countries. One only needs to consider for example the extent of small stock (goats) movement from North to South in Mozambique to realize that it could spread the length of that country in a very short time.

7. Will vaccination of small stock against PPR be as successful as the vaccination programme that enabled the eradication of rinderpest?

Achieving satisfactory PPR vaccination coverage of small ruminants is difficult (compared to cattle rinderpest vaccination), particularly in goats. This is mainly due to their reproduction rate, namely shorter gestation and high twinning percentage. You will need 2-3 rounds of vaccinations per year. However, excellent vaccines exist to protect small ruminants from PPR, and these can be a key weapon in combating it. Rinderpest was eradicated only thanks to the full commitment from donors, the scientific community, development organizations, the FAO, OIE and the International Atomic Energy Agency (IAEA), member governments, and farmers the world over. The same can be done with PPR if the political will is there.