

**2 November 2016**

## **TO WHOM IT MAY CONCERN**

The farm Fairholme belonging to Mr F. Bussiahn is situated close to Grahamstown in the Makana district. This farm is situated in an endemic heartwater area.

Heartwater is caused by the rickettsial organism *Cowdria ruminantium* and transmitted by the 3 host Bont Tick *Amblyomma hebraeum*.

The nymphal and larval stages of the tick become infected while feeding on domestic and wild ruminants and possibly certain game birds, at a time when the organism is circulating in the blood of these hosts.

These immature stages prefer feeding on smaller species of domestic and wild ruminants while the adult ticks prefer cattle and larger game animals. The nymphs and adult ticks transmit the organism to susceptible hosts without losing the infection.

A great number of *Cowdria ruminantium* isolates have been found and are referred to as stocks. These stocks differ in their virulence for different ruminants. Surveys conducted in South Africa indicate that only 1-7% of *Amblyomma* ticks are infected with the organism within the endemic area at any one time. This might explain why several years might pass without cases of heartwater being diagnosed within an endemic farm/area.

The existence of antigenetically different stocks of *Cowdria ruminantium* with varying virulence has been conclusively demonstrated. Recent studies have also indicated a poor cross protection between stocks. The introduction of animals immune to a particular stock into an endemic region where different stocks occur may therefore result in cases of heartwater.

The bush dwelling antelope species such as Bushbuck, Kudu and Duiker appear to be refractory to heartwater while the plains game including Springbok appear susceptible.

The fact that the Springbok herd running on Fairholme has prospered and multiplied yearly, their numbers varying between 150-250 depending on the numbers taken off annually is a strong indication that they are well adapted to the *Cowdria ruminantium* stock on the farm.

Unfortunately this does not ensure that they are well protected from other *cowdria* stocks which might be present on other farms if the animals were to be translocated.

It must also be borne in mind that the capture process (helicopter), handling by humans, sedation, transportation, bomarization, adaption to strange foods in a boma and finally adaption to a new environment with unknown veld types, watering points and cover from inclement weather etc. are very significant stress factors even for domestic stock and more so to wild game. These stresses can significantly reduce the natural immunity of these animals when released into a new environment.



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