



Beyond our borders: CBPP awareness

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South Africa is currently recognised as free of contagious bovine pleuropneumonia (CBPP) by the OIE. However, this freedom is dependent on continuous surveillance for and awareness of the disease. In Southern Africa, only South Africa, Eswatini, Botswana and the southern part of Namibia are recognised as CBPP free. The disease is regarded as endemic in much of West, Central and East Africa.

There is a surveillance programme in place for CBPP in South Africa. The active surveillance component involves taking a set number of samples from areas identified as high risk owing to their proximity to international borders. The Western Cape is not included in these high-risk areas, but our province still plays an important role in passive surveillance for CBPP during farm visits. As a result, all officials should be familiar with the signs of CBPP in order to recognise outbreaks if they occur, and be able to tell animal keepers what to look out for.

CBPP is a disease of cattle, but it can also infect water buffalo, Asian yaks and American bison. It does not seem to affect African buffalo as it has never been reported in this species. The disease is caused by infection by the bacterium, *Mycoplasma mycoides* var. *mycoides*, and causes significant economic losses in herds it infects. Eradication of the disease is difficult and costly, but has been achieved by many countries, including South Africa, from which it was eradicated in 1924.

Early warning signs of an outbreak are sudden deaths of a small number of cattle, often without showing any clinical signs.

As the outbreak progresses, approximately 20% of infected animals show fever, a drop in milk yield and laboured breathing, grunting and coughing with nasal discharge. A higher proportion (40-50%) of infected animals show a milder form of the disease with respiratory signs and intermittent fever. As the disease becomes chronic, animals lose condition, become emaciated and die.

Once the disease becomes established in a herd, fewer acute deaths occur. Some animals are asymptomatic and play an important role in transmission as they can be persistently infected. If treated with antibiotics, some clinical cases may improve, but run the risk of also becoming chronically infected animals.

Classic post mortem signs of CBPP include marbling of the affected lungs (often only one lung is affected) and

a large quantity of yellowish fluid surrounding the lungs. Over time this fluid coagulates and the consistency becomes thick. Adhesions of the lungs to the chest wall and fibrin coating the lungs are also seen in chronic cases.

Transmission is facilitated by infected droplets of breath or urine and therefore occurs most easily in scenarios of close, repeated contact between infected and healthy cattle. Airborne transmission is also possible over distances of up to 200m. The incubation period is usually three to six weeks, but may be as long as six months.

Any suspected case of CBPP should be reported immediately to the local state veterinarian, who will inform the provincial and national Veterinary Services. Testing of suspicious cases will be funded by DALRRD if an application is made by the local state veterinarian accompanied by the laboratory submission form.

Samples taken during a necropsy of a suspect case should include chest fluid and samples of diseased lung on ice. These samples can be used for antigen detection and bacterial culture. *Pasteurella* species are often cultured, but this result does not rule out a diagnosis of CBPP, as coinfections are possible.

From live animals, serum samples can be taken to test for the presence of antibodies. Antigen detection can also be done on nasal swabs as well as samples of nasal discharge, bronchoalveolar lavage or trans-tracheal wash.



A bull acutely infected with CBPP shows neck extension associated with laboured breathing (photo: Niang et al)

Outbreak events

An **ostrich** farm near **Tulbagh** tested positive for **avian influenza**. No virus was detected, but serology results indicate H6 exposure. No clinical signs of disease were seen in the ostriches.

Sudden deaths of **wild doves** and pigeons were reported from **Laingsburg**. Carcasses of laughing doves collected in the town tested positive for **pigeon paramyxovirus** (PPMV). Domestic pigeon owners in the area were advised to vaccinate their birds against Newcastle disease and PPMV.

A **sheep** farmer near **Darling** noticed two of his ewes losing weight late in 2020. After discussing the issue with his private veterinarian, one of the ewes was euthanased and samples taken tested positive for **Johne's disease**. The farm was placed under quarantine and the farmer plans to vaccinate his flock.

Salmonella enteritidis was detected during routine sampling of **chicken** neck skins at the abattoir. All birds in the batch were slaughtered and the meat detained and tested. All *Salmonella* tests on the farm of origin, located in the **City of Cape Town** metropole, were negative.

Lumpy skin disease was seen in **cattle** near **Caledon**. Clinical cases were treated symptomatically and the herd was vaccinated by a private veterinarian.

Cases of **erysipelas of swine** were detected after slaughter in two **pigs** from two different farms in the **Malmesbury** state vet area.

A small number of **sheep** on a farm near **Riviersonderend** were affected by **dermatophilosis** (lumpy wool), a bacterial infection of the skin by *Dermatophilus congolensis*.

Bovine ephemeral fever (three day stiff sickness) was diagnosed in **cattle** near **Riviersonderend** by a private veterinarian. The owner sees annual cases of the disease amongst his heifers.

A large outbreak of **canine distemper** is ongoing in **Ashbury** and the northern regions of **Montagu**. Welfare veterinarians are attempting to control the outbreak by euthanasing critically ill dogs and vaccinating clinically healthy ones.

Three outbreaks of **mange** in **pigs** were seen in **Chatsworth**, near Kalbaskraal.

A **dog** was seen with **sarcoptic mange** in **Chatsworth**. Dogs were also treated for mange at the **Beaufort West** office.



Dermatophilosis seen in sheep causing "lumpy wool" (Photos: J. Groenewald)

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