



BLUE TONGUE

(Exotic to Australia)

By Jeff Fyffe, BVSc MRCVS MACVSc

Bluetongue is a viral disease of sheep that is transmitted by biting midges of the *Culicoides* family. The disease is essentially an exotic disease to Australia.

Cattle have been known to be affected but are usually considered to be reservoirs of virus for sheep infection. The virus can multiply inside the midge.

The hosts for bluetongue virus (BLU) include sheep, goats, cattle, buffaloes, deer and antelopes.

The disease is present in the USA, Africa, the Middle East and Asia. There are a total of 24 types of the virus and vary in their ability to cause disease.

Eight strains of BLU have been found in Australia and all are thought to be of low-grade pathogenicity. They are found in the far north of the country - generally above the 16th parallel and away from the major sheep populations.

There has been only one case of a sheep developing the full disease in Australia. This was in 1988.

Countries importing livestock and their products from Australia have varying definitions of the "BLU Free Zones". It is generally accepted that Tasmania, Victoria, South Australia and Western Australia south of the 26th parallel, are free of both BLU and the midges that spread it.

The Disease in Sheep

After an incubation period of 4 -7 days there is a fever for about a week. Within 1 month there is reddening of the mucous membranes of the mouth and nose which is accompanied by excessive drooling and, initially, a clear nasal discharge which becomes blood-stained.

Swelling of the lips and tongue occurs which can extend to the whole head. There is profuse diarrhoea in some cases. In addition there is reddening and swelling of the hoof junction leading to extreme lameness and reluctance to move.

In only a few cases does the tongue turn blue.

The mortality rate varies with the strain of the virus causing the disease. There may be from 5 - 70% deaths - mostly from starvation.

The Disease in Deer

The full disease of sheep does not occur in deer, but deer, like cattle act as an important reservoir of the BLU virus.

There is a closely related disease of deer known as Epizootic Haemorrhagic Disease (EHD). This disease is confined to parts of the USA, western Canada and Nigeria.

EHD affects White Tailed Deer and Pronghorn Antelope severely and is subclinical in Mule Deer, Elk and Moose.

As with BLU, EHD is spread by biting midges of the Culicoides family.

Deer entering Australia from ANY country must be negative to both BLU and EHD.

There are stringent requirements on the importation of semen since BLU and EHD may be transmitted this way.

Transplanted embryos that have been correctly washed in processing, are virus free.