



BLUETONGUE FREQUENTLY ASKED QUESTIONS

ABOUT BLUE TONGUE DISEASE

Q1. What is Bluetongue Disease?

Bluetongue disease is caused by the Bluetongue virus. It is a disease that is transmitted from animal to animal by an insect – the *Culicoides* midge. The virus attacks the lining of blood vessels in the tissues and organs of affected animals. The disease is most severe in sheep and in some species of deer. It is often milder in cattle, goats, buffalo and antelope.

Q2. Are there different strains of the virus?

There are 24 serotypes of Bluetongue virus world wide. A serotype is a subdivision of virus strains. Five serotypes occur in the United States. **Only serotype 8 is currently reportable to the Canadian Food Inspection Agency (CFIA) under the federal Health of Animals Act (1990 c.21).**

In Canada, the Bluetongue virus has been reported in cattle, in the Okanagan Valley in British Columbia. New exotic strains of the virus have been recently encountered in Northern Europe. These strains have resulted, in some cases, in severe clinical disease in cattle. New strains have also been shown to be transmitted from mother to offspring.

Q3. What are the symptoms of Bluetongue Disease?

Symptoms may vary in severity but include high fevers in excess of 40°C (104° F), salivation, swelling of the face, ears and body. Erosion of the lining of the tongue and oral cavity and occasionally cyanosis of the tongue give the disease its name.

Sheep can also present with lameness due to inflammation of the hooves, diarrhea and pneumonia. Abortion and deformity of the fetus have also been reported. Fatality rates can run from 10% to 50% depending on the natural immunity of the flock and the predominant strain of the disease. For those animals that survive, recovery can be very slow.

Always call your Veterinarian if you suspect any disease may be affecting your sheep. Only a trained professional can diagnose and confirm the presence of Bluetongue disease.

Q4. How do sheep get infected?

Sheep can contract Bluetongue disease when exposed to the Bluetongue virus carried by *Culicoides* midges – an insect vector. The midges pick up the virus by feeding on infected carrier animals such as cattle and deer. The virus is then transmitted to sheep during the midge's next blood meal.

While there are hundreds of species of *Culicoides* midges, only one is considered capable of transmitting the Bluetongue virus (*C. sonorensis*). In Canada, its range is limited to Southern Canada, along the United States border.

Q5. How can I protect my sheep against this disease?

This is a viral disease transmitted through insects; so, it is difficult to prevent the disease entirely through improved biosecurity measures. It is thought that carrier animals may keep Bluetongue disease present from year to year and serve as a source of the virus to the local midge population. As the midge can be windborne for many kilometres, the disease can jump to a new area quite suddenly. Identification and removal of infected animals and protection of livestock from midge feeding form the basis for a disease control program. Some simple husbandry changes and practical midge control measures may help break the livestock infection cycle.

Housing livestock during times of maximum midge activity (from dusk to dawn) may lead to significantly reduced biting rates. Similarly, protecting livestock shelters with fine mesh netting or coarser material impregnated with insecticide will reduce contact with the midges.

The *Culicoides* midges that carry the virus usually breed on animal dung and moist soils, either bare or covered in short grass. Identifying breeding grounds and breaking the breeding cycle will significantly reduce the local midge population. Turning off taps, mending leaks and filling in or draining damp areas will also help dry up breeding sites. Dung heaps and straw bedding should be removed at least weekly to break the midge breeding cycle.¹

Q6. Is Bluetongue disease transmissible to humans?

There are no reports of human transmission.

Q7. Have there been any cases of Bluetongue reported in Canada?

Bluetongue has been reported in cattle, in the Okanagan Valley, British Columbia. Bluetongue has been observed in Australia, the USA, Africa, the Middle East, Asia and Northern Europe. Its occurrence is seasonal in the affected Mediterranean countries, subsiding when temperatures drop and hard frosts kill the adult midge vectors. Bluetongue has been spreading northward since October 1998, perhaps as a result of global warming which may promote viral survival and vector longevity during milder winters.

Q8. What is the treatment for Bluetongue disease?

There is no efficient treatment. Prevention is effected via quarantine, inoculation with live modified virus vaccine (available in the United States and restricted to some states only) and control of the midge vector.

Source: http://en.wikipedia.org/wiki/Bluetongue_disease; with input by Dr. Paula Menzies, University of Guelph and Penny Greenwood, Canadian Food Inspection Agency;