



SHEEP VETERINARY SOCIETY

Division of the British Veterinary Association

Dear SVS members,

Bluetongue awareness and raising vaccination

Over the next few months, farmers and their vets are facing tough choices, due to the uncertainty around the spread and severity of *Bluetongue virus* serotype 3 (BTV3), which crossed the channel from Europe in August 2024 into the UK. Data from Europe has shown that this strain is more virulent than the BTV8 involved in the previous bluetongue outbreak in England (Newbrook et al., 2024; Stellungnahme, 2024). We would like to encourage our members to actively engage with their clients about this disease, and consider holding client meetings to raise awareness of the risks and potential options for control.

The risks

The disease is very likely to over winter from 2024 into 2025, and will therefore reappear earlier than August (when it entered in 2024). As such, BTV3 replicates best at warmer temperatures, and so if spring and summer are warm in 2025, the spread, infection rates and severity of disease are likely to represent a worst-case scenario for UK livestock.

Another factor that needs to be considered, would be the removal of movement restrictions. These have done a good job of containing the disease to the East and South of England, low livestock density areas, in 2024. However, these restrictions have affected farming businesses financially, therefore in the government's decision-making over the coming months, this ongoing financial burden will be weighed against the potential reduction in disease spread that movement restriction may provide. Vaccination is therefore an important remaining viable control option.

Other control measures

As a vector borne virus, spread by *Culicoides* spp midges, infection and spread is difficult to control. Vector exposure can be reduced by housing in airy, positively ventilated buildings, which have external screens of mesh with holes less than 0.5mm, although this is seldom practical in UK farm situations. Please note that poorly ventilated housing may not help, and insecticide sprays or dips have not proven to be effective. Insecticides do not help due to their extremely short-lived activity against midges, and slow speed of kill. For example, think how often DEET needs reapplying while camping! **It only takes one infected midge bite to set up infection.**

Vaccination

The choice facing vets and farmers to control this disease is whether to vaccinate or not and when. At the time of writing, vaccination for BTV3 is only authorised in England. The potential

Sheep Veterinary Society

SVS Secretariat, Moredun Research Institute, Pentlands Science Park, Bush Loan, Penicuik, Midlothian, EH26 0PZ

Tel: + 44 (0)131 445 5111 Fax: + 44 (0)131 445 6111 E-mail: secretariat@sheepvetsoc.org.uk

Web: www.sheepvetsoc.org.uk

impact of disease, in terms of animal welfare and losses, must be weighed against the cost of labour and buying the vaccine. It can't be accurately predicted how widespread infection may become once conditions for increased midge activity resume. However, there is information that can help us from the 2024 incursion in the UK and the 2023-2024 outbreaks in the Netherlands and Germany. For example, for sheep,

- Of the sheep with clinical signs in the UK in 2024, it is estimated that the case mortality rate was 70% (F. Lovatt and R. Tarlinton, personal comms), similar to that seen elsewhere in Europe (Stellungnahme, 2024)
- In Germany, mortality (whole flock) in vaccinated flocks was 1-2% compared with 25-30% in unvaccinated flocks (Stellungnahme, 2024)

To help vets and farmers decide whether to vaccinate livestock on any particular farm, several UK livestock organisations have worked together to produce a BTV3 vaccines risk assessment template, which can be found on the Ruminant Health and Welfare Group (RHWG) website here:<https://ruminanthw.org.uk/wp-content/uploads/2024/12/Questions-for-vets-to-ask-clients-to-help-decision-of-whether-to-vaccinate-against-BTV3-02.pdf>

While BTV3 appears to be circulating in some areas at a low level even now, another consideration is that before vector activity increases again, there is time to get livestock vaccinated and establish immunity before exposure, with less need to change needles between each animal. It takes several weeks between initial vaccination and onset of immunity, especially in cattle, therefore waiting to vaccinate until the virus has spread to the local area may be too late to provide adequate, timely protection. Midge activity started in March 2024, so this may come sooner than we would like. Once BTV3 is actively circulating again, the need for changing needles increases considerably. This is to avoid inadvertently spreading BTV3 through a group of livestock, after vaccination of an asymptomatic carrier.

While the safety of the vaccines has not been established in breeding males, these are often the highest value animals on the farm. There is evidence that some males never clear BTV infection from semen, even if they recover from clinical disease. Breeding males should not be vaccinated in the 8 weeks before breeding. Another good reason to vaccinate them this winter, and ideally before mid-March.

Vaccination of cattle may have some benefit for cattle themselves, but the clinical impact of BTV3 in cattle is much reduced compared with sheep (Stellungnahme, 2024, F. Lovatt and R. Tarlinton, personal comms), although there are reports of increased barren rates in positive serology cows. However, the likely greater impact of vaccinating cattle, could be reducing the circulating levels of virus, to protect sheep. Although this is not yet proven.

There is a vaccination comparison table here <https://ruminanthw.org.uk/wp-content/uploads/2024/09/BTV-Vaccines-comparison-table-to-share-update-19.9.24.pdf>. Please check the current data on duration of immunity compared with expected peak infection in later summer or autumn.

Sheep Veterinary Society

SVS Secretariat, Moredun Research Institute, Pentlands Science Park, Bush Loan, Penicuik, Midlothian, EH26 0PZ
Tel: + 44 (0)131 445 5111 Fax: + 44 (0)131 445 6111 E-mail: secretariat@sheepvetsoc.org.uk
Web: www.sheepvetsoc.org.uk

The last point on vaccination is that there is currently supply, we do not need to tell you about how important that is after the last few years of poor supply of sheep vaccines. A concern with waiting is that supply maybe reduced later in the summer, especially if there is perceived to be an increased risk and a rush on vaccination.

Informing clients

We would strongly encourage our members to consider running farmer meetings in the next couple of months, to raise awareness of the risks associated with BTV3 and considerations for vaccination for farms based in England.

The webinars run and recorded by various organisations provide some useful information that could be used for your own meetings. Many of these can be found on the RHWG website, <https://ruminanthw.org.uk/bluetongue-virus/>. The vet only webinar from 12.12.24 provides a particularly useful summary, a link to this recording can be found on the members only area of our website, <https://sheepvetsoc.org.uk/>.

Newbrook, K., Obishakin, E., Jones, L.A., Waters, R., Ashby, M., Batten, C., Sanders, C., 2024. Clinical disease in British sheep infected with an emerging strain of bluetongue virus serotype 3. *Veterinary Record* 1–10. <https://doi.org/10.1002/vetr.4910>

Stellungnahme, A., 2024. Impfung empfänglicher Wiederkäuer gegen BTV-3.

https://www.openagrar.de/servlets/MCRFileNodeServlet/openagrar_derivate_00060106/2024-09-10_Stellungnahme-BTV3-Impfstoffe.pdf

Publication pending: F. Lovatt, R. Tarlinton. FARM LEVEL IMPACT OF BLUETONGUE SEROTYPE 3 VIRUS IN THE UK IN 2024

Sheep Veterinary Society

SVS Secretariat, Moredun Research Institute, Pentlands Science Park, Bush Loan, Penicuik, Midlothian, EH26 0PZ

Tel: + 44 (0)131 445 5111 Fax: + 44 (0)131 445 6111 E-mail: secretariat@sheepvetsoc.org.uk

Web: www.sheepvetsoc.org.uk