



## Preparedness and Response to Emerging Veterinary Disease Outbreaks

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### **Make them available – a bumpy road to the BTV-3-vaccine**

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#### **Introduction**

In Germany, the begin of the BTV-3-epidemic in September 2023 in The Netherlands was observed with great concern. Immediately, considerations started how a suitable BTV-3-vaccine could be made available before the next midges-season. It was unclear, how a timely marketing authorization or approval could be achieved.

#### **Experiences with the autogenous BTV-3 vaccine**

There was reason to expect that a vaccine would only become available by the end of 2024. To bridge the time and as there was danger in delay, the use of an autogenous BTV-3-vaccine was envisaged. Infected midges represent a confirmed epidemiological link. So, BTV restriction zones were defined as epidemiological units. Affected Federal States allowed the use of the autogenous vaccine, explicitly supported by StIKo Vet. As a precautionary measure, the first doses were applied by public veterinary institutions. Vaccinated sheep and cattle were closely monitored over fourteen days and showed no adverse reactions. Field vaccinations were commenced. One week after delivery of the vaccine to practitioners had begun, one of the preemptively vaccinated herds showed signs of bluetongue disease. Infection with BTV-3 was confirmed by the state laboratory. There was no natural transmission in April, but it could later be confirmed that the vaccine contained active virus. Immediately the delivery was stopped and the recall initiated. During the one week between delivery and recall over ten thousand doses had been administered, thirteen percent of the vaccinated animals became ill and about one hundred animals died. Due to the very rapid reaction of veterinarians, authorities and the manufacturer greater harm could be avoided. However, the concept of using an autogenous vaccine against BTV-3 had to be abandoned.

The use of three, non-authorised BTV-3 vaccines is approved.

Beginning of June, 2024, the Federal Ministry approved the use of three non-authorised BTV-3-vaccines. This was a gamechanger! There are differences, but all vaccines are safe and at least prevent severe disease. However, the voluntary vaccination does not result in sufficient vaccination coverage to prevent virus spread. In addition, there was not enough time to build up a reliable herd immunity. Despite all efforts, BTV-3 hit Germany with full force at the end of July. In the meantime, 29% of all cattle and 56% of all sheep have been vaccinated. Virus season is expected to start in June, but this year animal owners can protect their animals.