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Bluetongue Vaccination & Fertility – an overview for vets

Many farmers have understandable concerns about bluetongue vaccination, particularly its impact on fertility in sheep and cattle. However, there is no evidence that approved BTV vaccines reduce fertility, while the disease itself is known to cause infertility, abortions and poor lambing and calving outcomes. Vaccination remains one of the most effective ways to protect animal health, productivity and farm businesses. This overview for farm vets from the Sheep Veterinary Society and British Cattle Veterinary Association provides key information to support discussions with clients.

- **Impact of disease on fertility:** BTV infection is associated with significant adverse reproductive outcomes, including reduced fertility, impaired semen quality and temporary infertility in rams, abortions, foetal abnormalities and stillbirths. Surveillance data indicate that affected cattle herds have also experienced increased fertility problems and abortions.
- **Vaccine safety and fertility:** Evidence shows no indication that BTV vaccination adversely affects fertility in ewes or cows. In contrast, the reproductive impact of natural infection is substantial and clearly outweighs any theoretical risk associated with vaccination.
- **Timing for effective protection:** Protective immunity develops approximately three weeks post-vaccination. To ensure optimal protection, animals should ideally be fully vaccinated by early May, or at least three weeks before the onset of the anticipated risk period (typically early June).
- **Prevention of reproductive losses:** Given the severe effects of bluetongue on both male and female fertility, vaccination programmes should aim to be completed before virus circulation is likely on farm.
- **Breeding management – ewes:** To protect conception and early pregnancy, vaccination should be completed at least three weeks before rams are introduced to the flock.
- **Use close to mating:** There is no evidence that the vaccine itself affects fertility or pregnancy, and it may be safely administered to healthy rams and ewes up to the day before mating if required for disease control purposes.
- **Early pregnancy considerations:** As with any management intervention, unnecessary stress should be avoided in early gestation. Where possible, handling, nutritional changes and routine treatments (including vaccination) should be minimised during the first five weeks after mating.
- **Duration of immunity and boosters:** Manufacturers anticipate approximately 12 months of protection, although this is not yet formally stated on product datasheets. Annual boosters should be planned in line with recommended pre-risk-period timing.
- **General vaccine risk profile:** As with all viral vaccines, administration in early or late pregnancy should be considered carefully, but this is not a risk unique to BTV vaccines and does not indicate a specific fertility concern.
- **Safety experience:** Post-marketing experience indicates a strong safety – manufacturers report millions of doses administered with very low incidence of adverse events.
- **Use in breeding bulls:** Although formal fertility studies in bulls are limited, this should not preclude vaccination. Natural BTV infection can cause prolonged reductions in bull fertility, and extensive use in the UK and Europe has not identified vaccine-related fertility problems.
- **Vaccine availability:** At present, no significant supply constraints are anticipated, with manufacturers planning production to meet expected demand.