Bluetongue in Cattle & Sheep

Bluetongue is a viral disease affecting cattle and sheep.

Bluetongue spreads primarily through infected **biting midges (*Culicoides*)**, but other transmission routes can occur:

1. **Midge transmission** – the main route of infection.
2. **Semen transmission** – infected bulls can spread the virus through semen.
3. **Transplacental transmission** – the virus can pass from the **dam to the foetus**:

The disease **does not affect humans** and **poses no food safety risk**.

How the Disease Spreads (Midge Cycle)

1. A midge bites an infected animal and ingests the virus.
2. The virus multiplies inside the midge.
3. After 4–20 days, the midge becomes capable of infecting another animal.
    - Warmer temperatures shorten this period.
4. Infected animals remain contagious to midges for approximately 60 days.

Risk period in Ireland: April–November (temperatures >12–15°C allow virus replication in midges).

Clinical Signs to Watch For

- Fever, inappetence, drop in milk yield
- Reddening of mucous membranes
- Sores on nose, gums, dental pads
- Swelling of face, lips, tongue ("bluetongue")
- Breathing difficulties, drooling
- Discharge from eyes/nose
- Lameness
- **Reproductive signs:** abortions, empty cows/ewes, weak or malformed offspring

Note: Sheep often show severe signs; cattle and goats may appear healthy but still suffer **fertility losses**.

⚠ Fertility Risks

Bluetongue infection can seriously impact herd fertility:

- Reduced conception rates & increased return-to-service

- Increased number of empty cows/ewes
- Longer calving/lambing intervals
- Abortions & premature births
- Weak, stillborn, or malformed calves/lambs
- Reduced bull fertility

Animals infected early in pregnancy may lose the pregnancy, while infection later in pregnancy may result in malformed or weak offspring.

Breeding animals are therefore the highest-risk and highest-priority group for protection.

What to Do If You Suspect Bluetongue

- Report immediately to your vet
- Follow movement restrictions
- Monitor stock closely
- Record abortions & returns to service
- Reduce midge exposure:
    - Housing at dawn/dusk
    - Slurry management
    - Avoid wet/marshy areas

Vaccination

BTV-3 vaccines are permitted in Ireland under licence.

BTV-3 vaccines **do not fully prevent infection**, but they **greatly reduce virus levels in the blood and reduce the risk of severe disease and fertility losses.**

Vaccination Advice

- Discuss vaccination plans with your vet in advance.
- If vaccinating – order your vaccine in lots of time.
- **Do-Not** give at the same time as any other vaccines
- Follow the vaccine manufacturer's guidelines.
- Transport in a validated cool chain and keep chilled on farm until administration
- Once open – you must use within 10 hours
- **Highest priority:** stock bulls, breeding cows & heifers
- **Program for cattle:** 2 doses, 3 weeks apart; immunity develops ~3 weeks after second dose

- **Timing:** at least 6 weeks before breeding season or risk period
- Vaccination **reduces virus levels and fertility losses**, but does not fully prevent infection
- Breeding stock in both spring- and autumn-calving herds should be vaccinated.
- Vaccination **can be** used during pregnancy.
- Vaccination can also be used in store and finishing cattle to prevent performance losses.

Additional Fertility Protection

- Fertility-test stock bulls before the breeding season.
- Avoid introducing unvaccinated breeding animals during the risk period.
- Monitor breeding performance closely.
- Investigate unexpected infertility early.

Key Message: Even mild or subclinical infection can cause major fertility losses.