

Flexible vaccine timing can help prevent 'unexplained' cattle deaths

Protect your herd against 'sudden death'

We spoke to a leading UK cattle vet to discover the prevalence of clostridial disease, the impact it has on UK herds and why he believes that producers should be vaccinating against it.

text **Rachael Porter**

For producers committed to disease prevention, turn-out can be a congested time of year for vaccinations with Blue Tongue, leptospirosis, BVD and IBR, to name just four, vying for slots in the calendar. This may go some way to explaining why more producers do not protect their cattle, adults and youngstock alike, from sudden deaths caused by clostridial diseases, according to Pfizer vet Matt Williams.

He says the need for such protection is evident from a survey, carried out two years ago, that found almost half of dairy producers could recall sudden cattle deaths in their own herds. He also believes that this under-estimates the true extent of national losses.

"If you were to look back over several years then the likelihood is that most, if not all herds, would have lost cattle to sudden unexplained fatalities," he says. "Among a multitude of possible causes, from lightening strike to lead poisoning, one of the most common is likely to be a clostridial disease."

Mr Williams highlights that one such organism in human medicine is *Clostridium difficile*, widely and regularly reported upon by the national media as C diff for the difficulties it presents and the fatalities in which it is implicated, in our hospitals.

Paradoxically in sheep, given their lower value relative to cattle, he says there is good evidence that the threat of clostridial diseases is widely appreciated by sheep producers – an estimated 70%

of the UK ewe flock is vaccinated each year. Yet among cattle producers, Matt Williams suggests that the threat and reality of clostridial diseases appears to be rather under-estimated.

"The one exception to this is blackleg, caused by *Clostridium chauveoi*," he adds. "However, an estimated one-in-five sudden deaths attributed to blackleg are incorrect, and these would instead have been predominantly malignant oedema. This is also known as false blackleg and is caused by up to four different clostridium strains."

Producer choice

Mr Williams says the significance of this for disease prevention lies in the choice that a producer may take to prevent further deaths, because they may ask their vet or trained medicines supplier for 'a blackleg vaccine' when, in fact, broad-spectrum clostridial protection is required and is available at minimal extra cost.

"Clostridial bacteria themselves are widespread in the environment, so good bio-security is no defence," he explains. Most strains are present in the gut,

Pack highlights true cost of IBR

Intervet/Schering-Plough Animal Health has produced an education pack to highlight the costly financial losses associated with IBR infection in cattle herds.

"IBR is a highly contagious viral disease of cattle caused by a bovine herpes virus," says company vet Ian Anderson. "But, unfortunately, symptoms are often vague and sometimes the only sign of infection is a general malaise in heifers that have recently joined the herd."

IBR infection has the potential to cut annual milk yield by 173 litres or cause a four-week delay in beef cattle reaching slaughter weight.

"We've produced the new education materials to raise awareness of the

disease and highlight how best to control this costly virus," he adds.

The range of materials includes a handy guide to IBR, which explains that 72% of unvaccinated cattle herds regularly test positive for IBR.

It also highlights the latent nature of the disease, explaining that once a cow is infected it remains so for life. IBR remains dormant in the animal until stress triggers clinical disease and rapid spread.

Fortunately, disease control is quite straightforward and vaccination with Bovilis IBR Marker Live vaccine can help enormously to reduce circulation of IBR virus within a herd and cut the significant costs associated with infection.



**Clostridial disease facts:**

- Sudden unexplained cattle deaths are widespread
- Clostridium 'family' has a number of members all capable of causing sudden death
- Clostridium strains are widespread in the environment and are carried by healthy animals in the gut, organs and tissues
- Blackleg vaccine leaves cattle vulnerable to other strains of clostridia
- Ten-component vaccine available to cover blackleg and other clostridial causes of sudden unexplained deaths

organs or muscle tissue of healthy animals. The triggering factors that incite the transition from benign dormancy to toxin-spewing killer include trauma and stress, for instance, by bruising or other physical injury. Parasite activity is also a possible factor when liver fluke for example, cause localised tissue trauma.

One possible explanation, says Mr Williams, is that each of these events causes body tissues to become deprived of oxygen, triggering proliferation of the clostridia present and production of toxins.

'Flexible' vaccine

"Although different strains cause different symptoms, usually the first sign of clostridial disease is a dead animal," he adds. "In circumstances where a veterinary diagnosis can be made while an animal is still alive, treatment is rarely successful and it is frequently the best animals that succumb."

In the past, a typical time to vaccinate cattle against clostridia has been just before turnout, but Mr Williams suggests that vaccine congestion at this time of year means this needs reconsidering. One vaccine, Covexin™ 10 from Pfizer, offers cover, as the name suggests, against 10 strains of clostridia. In cattle, the primary vaccine course is two injections, four to six weeks apart, then single booster vaccinations either once or twice a year.

"Vaccine timing can be flexed to fit in with other priorities, with primary courses completed well in advance of spring to avoid turning out unprotected animals, at the same time as maintaining all year protection," he says.

"Financially, preventing just one fatality can cover the cost of vaccinating a herd for several years." |