

Beware the botulism threat

How can cattle producers avoid botulism, a devastating and untreatable bacterial disease? **Rachael Porter** speaks to a leading cattle vet to find out

Botulism in a dairy herd, although quite rare, can be devastating. A suspected outbreak on a unit in North Yorkshire led to the death of 120 cows from a herd of 160 – that's a loss of 75%.

'Suspected' is the key word – it's difficult to get a positive diagnosis. The Animal Health Veterinary Laboratory Agency carried out post-mortem examinations on the cattle but it was unable to confirm the cause with toxin testing. Botulism was suspected on clinical grounds.

"There was no link with poultry litter in this instance, which is the most common source of the bacteria – *Clostridium botulinum* – which produces an almost always deadly neurotoxin," points out Warwickshire-based vet Steve Borsberry, from XLVet Group

member 608 Farm Vets.

"Of the 40 cases that I've seen, no cattle have survived. Animals are typically found dead, with no previous signs of the infection."

SUB-ACUTE CASES

Sub-acute cases, which do occasionally occur, can be confused with milk fever. Cows appear to be uncoordinated and tend to stumble. They're usually found down, lying on their side, and a tell-tale sign of botulism is a slight protrusion of the tongue. This is because the neurotoxin causes loss of muscle control," Mr Borsberry explains. "The only other disease that has this symptom is foot-and-mouth."

He says that single cases can occur, but multiple cases within a herd are more common.

The infection is caused by *Clostridium botulinum*, a Gram-positive bacterium that produces neurotoxins. Mr Borsberry says it's often introduced to the herd as a

result of a carcass – usually a dead rabbit – being ensiled in grass silage.

"Big-bale silage tends to be more prone to carrying botulism – the pH of bales doesn't fall as low as that for clamped silage, and a low pH will tend to prevent the growth of the bacteria.

"Be extra vigilant when opening and feeding big-bale silage and discard suspect bales," he advises.

Another source of infection is chicken litter, which shouldn't contain chicken carcasses, but sometimes does. "If it's piled up in a field, waiting to be spread, cows are naturally curious and will investigate. And sometimes they get much more than they bargained for. I've even seen cows lying on piles of chicken litter, so I strongly advise producers to keep their cows away from it."

Mr Borsberry adds that botulism is a notifiable disease: "If you suspect it, you or your vet must contact DEFRA."