
DAIRY NEWSLETTER

Preventing Clostridia Diseases in Dairy Cattle

There has definitely been a trend upwards of the various forms of clostridial disease seen in primarily housed dairy cattle. Our clinic has seen numerous cases and herd outbreaks over the last couple of years. Since vaccines for the clostridial diseases are overall the cheapest on the market it behooves us to remember to vaccinate and develop a routine vaccination protocol with your herd veterinarian.

As a quick review clostridial organisms are spore-producing bacteria that live in the soil and can last for decades (fifty years plus). The spores are often ingested and often bruising, handling, liver damage and a myriad of other problems can trigger a clinical case. The majority of cases occur in the warmer months but it is still possible in the winter time. Survival even with vigorous treatment is very rare. Vaccination with the multivalent clostridial vaccines (up to a nine way in Canada approved for cattle (beef and dairy) is quite protective if done according to label directions.

In our practice there has been a growing number of clostridial disease outbreaks primarily caused by *Clostridium Septicum* (causes malignant edema) and *Clostridium Chauvei* (causes blackleg). Every year there are a number of outbreaks occurring in calves (mostly beef) at pasture across Canada so we know these organisms are in the soil and in abundance in some areas. So how is soil from the fields getting into dairy barns? First off, if heifers are pastured at any time in their life, exposure is possible. Secondly, baled hay often can contain dirt thrown up by pickups and if pocket gophers are present they drag up lots of soil to the surface. Since the increased use of the disc bine versus the sickle haybine there has seen an increased incidence most likely from more dirt getting thrown into the swath. Discbines have many advantages over the sickle mowers so this is no means a negative on them. The bottom-line is one must vaccinate dairy cattle plain and simple. Any type of excavating or dirt being brought in by farm equipment or other vehicles on the tires has the possibility of containing clostridial spores. It is often a critical mass of spores that is necessary before we see clinical disease. The problem is that with most of these organisms the only sign we see is sudden death. An autopsy by our veterinarians is necessary to confirm it. This is why it is also imperative to have sudden deaths and other deaths autopsied to help find out the actual cause of death. This also helps us in our vaccination decisions.

Dairy farmers these days use more synchronization programs such as Ov-sync or Co-sync that require GnRh (Fertiline) and prostaglandin (Bioestrovet) shots to complete. On the label of all prostaglandins there is a warning of the rare possibility of the bruising created by the administration of the prostaglandin initiating a clostridial myositis (inflammation of the muscle). These can occur in almost outbreak form in naïve dairy cattle.



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Clostridial vaccines continue to be cheap insurance and can be used in the face of an outbreak to stop clinical disease within 10 days. In the dairy barn some herd veterinarians booster the whole herd at once but with any vaccine given to dairy cattle a decrease in milk production short term is expected so most give it at the dry off period. The clostridial vaccines are also generally approved for organic beef or milking programs but confirm the specific vaccine first.

With the organisms being endemic and spores lasting as long as they do the only way to prevent is by vaccinating and if any vaccine gives close to 100% protection it is the clostridia vaccines.