Clostridial infections

On most farms, there is a type of bacteria that can cause a lot of headaches; clostridium is a group of bacteria that is common in the environment and even in our animals.

Normally, when things are going well, this bacterium is in the background and not something a lot of us think about daily. However, when the balance of the environment and our animals is disrupted, clostridium takes advantage quickly and aggressively.

This bacterium is sneaky. Clostridium forms spores, which give the bacteria a protective structure so it can remain dormant in the environment and activate when the conditions are right. By doing this, herds/flocks may go many years without knowing clostridium is around, but then it pokes its ugly head and does so very quickly and aggressively.

Commonly known clostridial infections include tetanus and botulism. However, many kinds of infections exist depending on which strain is on farm. In our sheep and goats, we commonly see two different types - Clostridium Perfringens type C and Clostridium Perfringens Type D. This newsletter will provide quick references to these two bacteria and prevention strategies to try on farms.

Clostridium perfringens type C:

This strain of clostridium is found in the environment quite readily and can be seen in herds/flocks with poor vaccine status or when lapses in management occurs. Affecting mainly youngstock, at less than a week of age, this bacterium leads to an infection called necrotic enteritis. During outbreaks or individual cases, lambs/kids are found dead, after being seen healthy hours prior.

<u>What does it look like:</u>
Most commonly, we find dead lambs/kids; however, in some cases, we notice other clinical signs such as loose manure (that may contain blood), depressed animals and those with tucked up abdomen.

<u>Diagnosis:</u>
Diagnosis is based on clinical history. Post-mortems and diagnostic tests can be helpful in confirming.

<u>Treatment:</u>
Unfortunately, treatment of those that are already sick is, unrewarding and focusing on those that are healthy is often the next step.

<u>How to prevent:</u>
Management of the environment, and of the colostrum are the two best keys to success in minimize this disease in our animals.

Lambs/kids should be born into a clean environment. Moving ewes/does into fresh, individual pens with deep clean bedding (i.e. straw) is one of the easiest ways to reduce environmental risk. Ensuring that ewes/does are free of mud and manure around their legs, udder and belly prior to birth, is also crucial for success.

When it comes to colostrum management, ensuring we vaccinate our dams properly is critical, so are antibodies in the colostrum that can benefit our neonates. Additionally, ensuring our young stock ingests

sufficient colostrum, whether directly from their mothers or a supplemental source to help protect them from disease.

Work with your veterinarian to develop a vaccine and colostrum management protocol to prevent disease in your neonates!

Clostridium perfringens type D:

This strain is common globally and can cause devastating outbreaks on farm. This strain can be found in the environment (i.e. soil and dirty bedding) and even the digestive tracts of healthy animals.

When disease occurs, we tend to see it in our weaned youngstock, between 3 to 6 months of age; however, it can be seen in adults too, especially if there is no/poor vaccine status. It most common presents as sudden death in our "best ones", or non-discriminatory. Commonly, this disease is known as over-eating disease / pulpy kidney disease, as it is seen when animals are introduced to a new lush pasture (like in the spring), a high grain diet, or sudden feed changes.

What does it look like:
The most common clinical sign is sudden death. However, depending on how often we observe our flocks/herds, we may see other signs such as, blindness, convulsions, head pressing, increased breathing rate, and sometimes diarrhea.

In cases where adults are infected, we can see it as diarrhea, membranes in the feces, bloated, or over-vocalization (due to pain). In those that survive, it can take many weeks to recover.

Diagnosis:
The resenting complaint of sudden death is enough to make a presumptive diagnosis. However, performing post-mortems and sending samples to the laboratory is the most definitive way to determine if this is truly the cause.

Treatment:
Unfortunately, once an outbreak begins, treatment is not very easy. Those showing clinical signs are hard to treat, and any treatment will likely be unrewarding. Prevention is key and the most effective. Working with a veterinarian is critical to success, and **quick intervention is the way to success**. Removing starch from the diet (i.e. corn/grain) and providing a low energy food (like hay) will reduce the risk. As well as vaccinating the healthy animals.

How do I prevent this:
Vaccinating your herd/flock is crucial! Clostridial vaccines are one of the cheapest, most effective and safest vaccines for your animals. As a small ruminant team, this is one of the vaccines that we highly encourage you implement. Work with a veterinarian to design a protocol that matches your operation.

KEY POINTS:

Working with your veterinarian to develop a vaccine protocol is critical for ensuring your flock / herds health. Clostridial vaccines are recommended for farms of any size. They are cheap, easy to implement and effective at preventing outbreaks.