Management tips to reduce the impact of calf scours

Neonatal calf scours (diarrhea) is a multifactorial issue. The risk and occurrence can change year to year based on many different factors. Due to the cold, wet and windy weather of late, it sets up for some unique challenges in combating calf scours this year.

Causes

Scours can be initiated by infectious agents such as viruses, bacteria, and even protozoan parasites. It is important to note that most of the pathogens of concern are shed at low levels through the feces by healthy members of the resident cowherd. Most of the disease and death loss related to scours occurs within the first month of age. The bacteria, E. coli, is a common culprit within the first 5 days of life. Rota virus, Corona virus, and cryptosporidium (protozoa) are commonly identified in cases between 1 week and 3 weeks of age. Mixed infectious with more than 1 pathogen commonly occurs as well. Salmonella and Clostridial infections can also occur with minimal clinical signs before acute death.

Nutritional causes of neonatal diarrhea can also occur. “Milk Scours”, as it is often referred to, is a non-infectious cause of white loose manure. This tends to occur after a cow/calf separation event. The hungry calves tend to over eat leading to undigested milk passing through the digestive tract. The intestinal disruption is often self-limiting and clears up within a day or two without treatment.

Clinical Signs

- Diarrhea: The color of the stool can be brown, green, yellow, or grey in color. Tail and the rear legs may be covered in wet manure. Bloody stools can also be seen with Salmonella, Clostridial, or coccidiosis.
- Lethargy: noted by decreased desire to nurse, depressed attitude, and reluctance to stand.
- Dehydration: identified by having sunken eyes. Another effective means to measure dehydration is by tenting the skin of the calf. A well hydrated calf’s skin will snap back flat after pinching it. if it takes 1-3 seconds, the calf would be ~6-8% dehydrated. If the skin tent takes up to 5 seconds, the calf would be ~8-10% dehydrated.
- The severe loss of fluids also interrupts the calf’s acid/base and electrolyte balances

Treatment

The most important thing to do when deciding how to treat calf scours is to work with a local veterinarian. They have the expertise to help guide producers through the process on how to intervene to give the best chance for calf survival. Treatment of calf scours is directed toward correcting the main issues: Dehydration, Acid/Base imbalance, and Electrolyte imbalance. Fluid therapy is typically the first step in scour treatment. This is usually carried out through oral electrolytes and fluids to correct the dehydration and continued loss.

Selection decisions of these products should be made with the input of a veterinarian. Always follow label directions when mixing and administering electrolyte solutions. However, if the calf is severely dehydrated IV fluids administered by a veterinarian offers the best chance to recovery. Many times the calves lose their ability to maintain proper body temperature. Supportive care through thermal support during the course of disease may help increase calf vigor, desire to suckle, and mentation. Veterinarians may also include oral or systemic antibiotics in certain cases when it has been determined to be bacterial cause, or septicemia is a concern.

Possible treatment procedures should be discussed with a veterinarian before the calving season begins. Having a basic inventory of supplies and products as well as a protocol in place will ensure proper early treatment.

Prevention

Regardless of the pathogen(s) involved, there are some basic management strategies to reduce the risk of developing an outbreak. Four key areas to concentrate on are biosecurity, supporting proper immune function, environmental management, and hygiene.

Biosecurity:

It is imperative to not inadvertently introduce disease into an operation. But it is something that is often overlooked. If a new calf or cow from outside the herd is introduced during or around calving season (30 days before/30 days after), ensure that those individuals are quarantined and separated from the rest of the herd. This often happens when we graft a sale barn calf onto a cow that lost its calf, or purchase a milk cow to nurse an orphan. Any animals from outside your herd can introduce this devastating disease to your operation.

Sick animals (especially scouring calves) can shed enormous amounts of pathogens into the environment. Isolating these animals and eliminating any mingling of infirmed animals and newborns will greatly reduce the exposure risk to new born calves.

Immune Function:

Calf hood immune protection all starts with the first critical meal known as colostrum. Ensuring adequate intake and suckling behavior of the freshly born calf is important. Intake within the first few hours of life will increase the efficiency of colostrum antibody transfer into the calf. Vaccination status of the dam can also play a critical role. Boosting immune function will transfer a higher level of antibody to those pathogens into the colostrum.

Environment:

Reducing the environmental contamination of pathogens that new born calves are exposed to is a great way to reduce the risk of scours. These pathogens build up in the environment where cattle are housed for extended periods of time. If a single calving area is utilized on the operation, strict management may be necessary to mitigate risk. Cows and newborn calves should be turned out into a "clean" pasture as soon as possible after birth. Ideally the pasture of choice should be filled with cows with calves of roughly the same age.

Barns and chute areas used to intervene during hard calving situations should also be kept clean. These areas also become contaminated through the season. Removing and replacing soiled bedding can reduce the pathogen load. After assisting births, cleaning teat ends of the cow will reduce the exposure of environmental pathogens during the calf's first suckling opportunity.

Hygiene

Many scour pathogens can cause illness in people, this is known as zoonosis. Personal hygiene is critical to ensure ranchers don't succumb to the same diarrhea causing bugs as their calves. Washing hands, wearing gloves, and disinfecting equipment can all reduce the chance of sickness.

Hygiene is also critically important to avoid accidental infection of newborn calves through handling and management procedures. Esophageal tube feeders, nursing bottles, gloves, boots, and coveralls can all carry dangerous pathogens from a sick calf to a newborn calf. Use separate tube feeders and equipment for sick calves, and be sure to wash them thoroughly between animals. Work flow is another important concept to consider. Handle sick or infirmed calves after any healthy calves or newborns. This will ensure there it not cross contamination from clothing.

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