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Preventing Metritis in Dairy Cows

I have been dealing with Metritis recently that has prompted some research and investigation and led to this article to serve as a reminder of things many of us know intuitively but may need a reminder of the impact of the small things. In a time of very sophisticated health protocols and strong antibiotics, we may be overlooking some simple management aspects that could prevent Metritis. Metritis is an evil that we deal with daily on a dairy and to various degrees depending on many factors at play at any given time. The ultimate cause of Metritis is bacterial overload in the uterus. That statement is an oversimplification of a multi factorial problem for most dairies.

All animals will get some degree of bacterial infection during parturition. The uterus has natural mechanisms in place to fight these bacteria. The problem occurs when the growth of the bacteria in the uterus outpaces the animal's natural immune system response to eradicate it from the body. Once the bacterium has established dominance, an antibiotic intervention is required in order for the animal to continue adequate lactation and to have a chance to rebreed on schedule. The uterus is designed to be sterile so when the reproductive tract is opened during parturition, bacteria have opportunity to access the uterine linings and colonize. From a dairy management perspective, if we can limit the amount of bacteria that are present in a calving area, then we can potentially limit the opportunity for the overload that would require an intervention. It is recommended when calving in dry lots, to provide 125-159 sq. ft. per cow. It would be good to remember what bacteria need to survive. Bacteria need moisture and a food source. The ability of a dairy to keep a calving area clean and dry will yield lowered Metritis incidence. It is also important to implement scheduled removal of discharged placenta as the decomposition of living tissue can provide an excellent bacterial medium for growth.

Metritis incidence has been shown to increase when a cow has some degree of dystocia. The longer an animal engages in the birthing process, the longer the length of time that the uterus is open and exposed to bacterial overload. If assistance is required, it is important not to introduce bacteria into the uterus through contaminated obstetrical appliances. All dairy workers assigned to calving must be adequately trained in the disinfection of all tools not only between animals but potentially during the assistance of the same animal.

We need to monitor BCS of dry cows and close up cows to prevent over feeding. If we have cows coming into parturition with too much conditioning, the nutritional for lactation may cause the animal to pull from fat reserves that can cause metabolic issues, which could lead to a decreased immune response which could leave the cow susceptible to many diseases which would include Metritis. Dry cow BCS should be monitored closely and fed a diet that would limit fat accretion. Heifers should be evaluated continuously with specific attention 60 days prior to calving.

Most close up diets are designed to provide all the nutrients the animal needs at a given level of intake. If there are factors where the cow or heifer is not eating at

the recommended level then they may not be getting all of the required nutrients to meet nutritional demands as well as the ability to generate a solid immune response. Close up cows should have a minimum of 30" of bunk space per cow. Overcrowding in the close up pen creates more competition for feed and reduced intake in the timid animals. Frequent moves into the close up pen could have negative impacts on individual animal intake due to the frequent social disruption. There is research that has shown that reduced feed intake in the close up pen has increased risk of disease during the transition period. Any and all efforts to insure that all animals have adequate feed intake will be beneficial in the prevention of transition diseases.

Solid management practices may be our best defense of Metritis. If we can keep the calving pens clean and dry with adequate space, provide quality nutrition at correct levels of intake, and make sure all animals have access to feed we will reduce mastitis incidence and ultimately improve our bottom line.