KIRKTON
BOVINE SERVICES

April 2016

DAIRY NEWSLETTER

Pain Management in Mastitis Therapy

Mastitis continues to be the #1 treated disease on most dairy farms, and therefore continues to be an economically detrimental disease in the dairy industry and to your farm's profitability. The negative effects due to lost milk production and treatment costs are evident, but negative effects regarding pain, discomfort and reduced welfare are significantly underestimated. How much pain and discomfort do you feel your cows experience when they suffer from a case of clinical mastitis? A study in 2010 found that only severe cases of mastitis were ranked by dairy producers as "painful", and when compared to other common health problems, was ranked significantly less on the pain assessment scale. With new behavioural research, it is quite evident that cows experience significant and long duration pain in association with a severe mastitis event (ie. An e.coli, watery mastitis where the cow is sick). But it has also shown that even a mild case of mastitis is perceived to be very painful to a cow, therefore compromising their welfare and promoting that something be done to address the discomfort.

Pain management therapy with a non-steroidal anti-inflammatory drug (NSAID) has been proven to reduce the clinical signs of mastitis, reduce pain felt in the udder, improve milk yield, reduce somatic cell count and decrease the risk of being culled from the herd.

What pain control methods are on the market?

Product	Route of administration	Amount	Milk withdrawal	Meat withdrawal
Flunixin meglumine (ie. Banamine, Cronyxin, Flunazine etc)	IV only	1-2mL/45kg	36 hours	6 days
Ketoprofen (ie. Anafen)	IV or IM	1.5mL/45kg	0 hours	1 day
Meloxicam Injectable (ie. Metacam)	IV or SQ	1.1mL/45kg	96 hours	20 days
Meloxicam Oral Suspension	Orally	3mL/45kg	96 hours	35 days

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Other Benefits of NSAID use in Mastitis Therapy

In addition to the pain associated with mastitis, studies have also shown that mastitis has negative effects on reproductive performance, including a longer interval from calving to conception, more services per conception and lower conception rates and a higher risk of early embryonic loss. This then leads to premature culling from the herd.

A study completed using injectable meloxicam concluded that when it was used in conjunction with an effective antimicrobial intramammary therapy product for mild to moderate cases of clinical mastitis, there was more than a 30% greater increase in clinical cure rate, compared to cows not treated with meloxicam. The study also showed that the success at 1st breeding was 48% higher in these treated cows, resulting in a 20% decrease in the number of breedings required to achieve conception. Finally the study showed that meloxicam treated cows improved their pregnancy rate at 120 days in milk by 29% compared to the placebo group. This data further supports the importance of an effective non-steroidal anti-inflammatory drug as part of your treatment protocols for all cases of clinical mastitis.

Conclusions

Given that summer is historically a time where there are increased rates of mastitis on farm, now is the ideal time to review your mastitis treatment protocols with your veterinarian to ensure you are collecting and testing samples properly, using the correct intramammary product and the most appropriate anti-inflammatory product to guarantee the best chance for successful management.

Prevention is the key to Success

As is the case with any disease, if a farm can take measures to keep their animals disease free, the issue with pain and its associated decrease in welfare become a non-issue. If you are looking for ways to decrease mastitis on your farm, or reduce the spread of any other disease, by ramping up your farm's biosecurity program, we encourage you to attend one of the upcoming Dairy Biosecurity workshops sponsored by the Ontario Soil and Crop Improvement Association. Dr. Katharine is the workshop leader for these sessions, and by attending, it makes your farm eligible for cost-share money from the Growing Forward 2 program if you wish to implement any changes.
Upcoming local workshops are:

- April 12 – 10am - 3pm – Dorchester Legion, Dorchester
- April 14 – 10am – 3pm – Brodhagen Community Centre, Brodhagen

Pre-registration is required, but the workshop is free of charge.
http://www.ontariosoilcrop.org/oscia-programs/workshops-webinars/biosecurity-webinar/