KIRKTON
BOVINE SERVICES

December 2016

DAIRY NEWSLETTER

Random Ramblings from Dr. Reg's Late Night Reading

Klebsiella mastitis. This particular bacteria has shown its ugly head on several farms and it has been quite problematic in some herd and with some individual cow cases. Usually this type of mastitis is acute, watery and can cause a cow to look quite tough. The resolution with your standard mastitis therapy is not always good and some cows and quarters are lost for good. Conventional vaccines against gram negative bacteria provide little protection against *Klebsiella* species at the label dose and only a mild benefit with a more aggressive schedule. Work with the bacteria has shown that some strains of *Klebsiella pneumoniae* have a much larger capsule size and were better able to avoid killing by white cells in the udder. This would help to explain some of the outbreak situations we have seen in recent years and the reluctance of this bug to be subdued with aggressive culturing, therapy and prevention. It is not a cause and effect study, but rather a description of some specific characteristics of the bacteria that help it to become successful on farms.

Prevention is the key to this one, but it involves cleaning! Cleaning all alleyways, including cross-overs, removing areas of heavily soiled bedding (back of stalls, in the stalls by water troughs), avoiding any waste water contamination with cows feet and udders and improving dryness in the stall areas are all extremely important. Even sand bedded free-stalls that get neglected and wallowed out are susceptible to growing *Klebsiella* bacteria.

Mastitis vs Oocyte Developmental Competence

So many times I have been presented with a cow to preg check and the comment is made, "I don't expect her to be pregnant, she had mastitis." There seems to be just as many surprise diagnosis of pregnant as there are "expected" diagnoses of open. Why? There is new research to suggest it may depend on when the cow had the mastitis and if her SCC was elevated.

In this recent study, the ovaries were collected at the abattoir from cows with known SCC values. The oocytes were collected and subjected to in vitro maturation and fertilization. The donor cows were divided into 3 groups based on SCC - low, medium and high SCC. The results of fertilization, and early embryonic development, from cleavage through to development into the blastocyst stage, were recorded. The results indicated that ***if a cow had an elevated SCC*** (medium and high groups) they were still able to fertilize the oocyte and cleaved into embryos but ***did not*** develop into a blastocyst stage. As this study was done in vitro (in the lab), outside the cow, it suggests that the ability of the oocyte to develop and mature into a viable embryo has been interfered with as a result of the elevated SCC. It also did not matter which bacteria caused the mastitis in the first place. The developmental competency of the embryo to become a successful pregnancy has been interrupted by the response to what has happened in the udder. All the more reason to reduce mastitis in early lactation animals and monitoring fresh cow SCC levels.

Talk with your herd health veterinarian today to discuss what more can be done to reduce mastitis risk on your farm!

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Seasons Greetings from the Veterinarians and Staff

It is our pleasure and honour to be a part of your dairy farm's management team and we look forward to continuing this successful relationship in 2017 and beyond!

The office hours for the upcoming holiday season are as follows:

CLOSED: Sunday, December 25th Sunday, January 1st
Monday, December 26th Monday, January 2nd

Reduced Hours: Saturday, December 24th open until 12 Noon
Saturday, December 31st open until 12 Noon

Regular office hours resume Tuesday, January 3rd

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
December 2016				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	**24 Open 8am-Noon**
25 CLOSED	**26 CLOSED**	27	28	29	30	**31 Open 8am-Noon**
1 CLOSED	**2 CLOSED**	3				

DRUG ORDERS: The holiday season may also cause delays in our ability to place and receive drug orders.

- To ensure your drug orders arrive **prior to Christmas**, please call the clinic to place your order by **Wednesday December 21st.**
- To ensure your drug orders arrive **prior to the New Year**, please call the clinic to place your order by **Thursday December 29th**.

Please note emergency services will NOT be affected throughout the holiday season.

Please don't drink and drive and have a Happy Moo Year!