

Bovine Trichomoniasis

Trichomoniasis is a production limiting disease that has gained some notoriety in certain areas of Alberta in the recent past. This brief overview of “Trich” will discuss the basics of the mechanisms by which trichomoniasis works and wreaks havoc and some control measures that can be implemented so that, hopefully, you can avoid learning about it the hard way.

Trichomoniasis is an infectious disease caused by the *Tritrichomonas foetus* organism. It is a protozoan and is classified within an entirely different class of organism than the bacteria or viruses we are all familiar with. In a herd that has become infected with trichomoniasis, the organism lives harmlessly within the secretions in the prepuce of the bull. Bulls that are carrying the organism show no clinical signs at all and are impossible to pick out without testing them for the disease. Infected bulls then serve as a reservoir of trichomoniasis and pass the organism onto cows during the breeding process. Non-infected bulls can also become infected by breeding a cow that has been infected. It is a venereal disease, meaning that the only mode of transmission is through the act of breeding. When a cow is infected when she is bred, she will conceive normally but then the organism will cause early embryonic death (abortion) early in the course of the pregnancy. The overall result is a high number of cows that lose their calves and turn up open or late bred in the fall at pregnancy testing time.

The classic situation where trichomoniasis can easily get out of control is in community grazing associations where there are large numbers of cows and bulls all coming together from different sources during the breeding season. In these situations, all it takes is a single bull or cow that is carrying the disease to become a source of infection for the other animals they are pastured with. In outbreaks of trichomoniasis, when cows are pregnancy tested coming out of the reserves in the fall it is not uncommon to find open rates in the 30% range. I have even witnessed extreme cases of open rates approaching 70% in herds. However, this disease is not limited to herds that are community pastured; it can occur in any herd that brings in a bull or cow that is carrying the organism.

The best time to consider implementing some control measures is prior to planning your breeding season. Control measures are fairly straight forward and are based on the following principles:

- 1) The only mechanism of transmission is strictly through the physical act of breeding (from bull to cow or cow to bull)
- 2) A virgin animal is considered to be non-infected since it has never bred or been bred.
- 3) A cow that gives birth to a live calf is considered to be non-infected (although, in fact, there is a 3/1000 chance that a cow that calves in a Trich-infected herd can still be a carrier)

- 4) With the PCR test we use for testing bulls, a single negative test is 85% sensitive for diagnosing trichomoniasis, 2 negative tests 1 week apart is about 93% sensitive for diagnosing trichomoniasis, and 3 negative tests 1 week apart is about 97% sensitive for diagnosing trichomoniasis. Bulls that are positive cannot be cured and should be culled.

So, for community pasture boards that are considering implementing control measures the following might be examples of some measures taken:

- 1) All females entering the reserve must either be virgin heifers and cows must have a calf at foot (no open mature cows allowed)
- 2) All bulls that enter the reserve must test negative for trichomoniasis and no home breeding with bulls is allowed before bringing them to the reserve.
- 3) All fences on the reserve must be inspected before animals are allowed into the pastures to ensure that there is no reasonable opportunity for cows or bulls to cross barriers and intermingle with adjacent groups of cattle (remember that bulls have been known to cross rivers, climb high hills, and bushwhack through pretty thick brush to get to a cycling cow).

Individual producers may consider the following measures:

- 1) Only buy virgin heifers and bulls or confirmed pregnant heifers or cows.
- 2) Avoid buying animals from herds with poor reproductive performance.
- 3) If the reproductive history of a bull is unclear, test for trichomoniasis before using the bull for breeding. Try to avoid sharing bulls with other producers.
- 4) Don't purchase open cows.
- 5) Try to cull open cows.
- 6) Ensure your fences keep your bulls with your cows and the neighbor's bulls with the neighbor's cows.
- 7) Have a short breeding season to limit the chance of trichomoniasis spreading too far within your herd should it somehow enter.

An increased awareness of this disease will help producers become more familiar with these issues and help to avoid some discouraging circumstances we have experienced in the recent past. If you suspect you may be having trouble with reproductive performance or want to learn more about trichomoniasis contact your local bovine veterinarian. We can help with testing, recommending control measures, or simply with dispensing information. Remember, good fences make good neighbors.

Dr. Jordan Holt, DVM

Highview Animal Clinic
High River, AB