

Livestock Health Series

Trichomoniasis in Cattle

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Introduction

Trichomoniasis, commonly referred to as “trich,” is a venereal disease of cattle caused by a protozoa organism, *Tritrichomonas foetus*. This small, motile organism is found only in the reproductive tract of infected bulls and cows. Infected cattle can lead to major economic losses due to infertility, low pregnancy rates, an extended calving season, diminished calf crops and occasional abortions in pregnant cows and heifers. It can also be very costly to eradicate from a herd. Trich is not a human health issue, but it is currently a reportable disease in Arkansas.

Transmission and Clinical Signs

Trich is transmitted from an infected bull to the cow’s reproductive tract during breeding and then migrates to the uterus. Infected cows will experience infertility and early embryonic death, causing the cow to return to estrus (heat) and subsequently leading to poor pregnancy rates and an extended breeding season. This disease causes very few outward signs in infected cows or bulls.

An infected cow may show a very subtle, mild vaginal discharge 1 to 3 weeks after becoming infected, but in many cases no outward signs are apparent. Obviously, these signs can easily go unnoticed; therefore,

trich can be present in a herd for a considerable time before it is suspected and diagnosed. Repeat breeding or infertility of individual cows can last up to 5 months. The reason for the open or late cows is that the organism causes the loss of the calf a few weeks into the pregnancy. The majority of infected cows will clear the infection if given 120 to 150 days of sexual rest. Most cows will eventually settle, if given enough time, but their immunity to the disease is weak; therefore, they can be reinfected the next season.



Figure 1. Trichomoniasis typically affects older, experienced bulls.

An infected bull has virtually no outward signs of infection, but the bull is the main source of transmission for the herd. In bulls, the organism lives on the tissue lining of the penis and preputial sheath. Once infected, bulls (especially bulls over 4 years of age) often stay infected for life. Trich typically gets introduced into a herd by the introduction of one infected animal, an infected bull.

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Diagnosis

In spite of the fact that bulls do not show clinical signs of infection, the organism is easier to find in bulls than in cows. This is because bulls become long-term “carriers” of the disease while cows eventually shed the infection. Two weeks of sexual rest is recommended before a bull is tested. This allows the organisms time to build up to a detectable level. A wash and scrapings from inside the preputial sheath are collected and placed into special growth media. This sample can be used for two types of test: a culture test or a polymerase chain reaction (PCR). Confirmation of infection can be identified by three separate culture tests (weekly intervals) or one PCR test. For more information about testing, contact your local veterinarian.



Figure 2. Growth media packet and sampling pipette used to collect sample from bull's sheath.

Treatment and Prevention

Currently, there is no approved treatment for cattle infected with trichomoniasis. However, cattle producers can do a lot to protect their herds from a trichomoniasis outbreak.

- When purchasing bulls, purchase virgin bulls if possible.
- If purchasing a bull that has prior breeding experience, or if you are renting or borrowing a bull for breeding, then isolate the bull and have it tested for trich before turning the bull out with the cows.

- If you suspect a problem in your herd, test your current bull battery. Any positive bulls should be culled and sold for slaughter only.
- Keep the neighbor's bull out of your cow pasture. You don't know if he may be a carrier of the disease.
- Pregnancy check cows in a timely manner after the breeding season to identify a potential problem early.
- When purchasing females, purchase virgin heifers and/or cows from a reputable source.
- Keep fences in good repair to prevent accidental contact with potentially infected cattle. Monitor traffic in and out of the herd.
- Keep good records of a herd's reproductive efficiency. The records can help identify a possible problem.
- Maintain a defined breeding season, perform pregnancy exams and cull open cows.

A vaccine is available to aid the control and prevention of this disease. The vaccine can be useful in cows but does not protect bulls from becoming infected. Vaccination requires two injections, typically administered 2 to 4 weeks apart. Consult with your veterinarian when starting a trichomoniasis vaccination program for your herd.

Breeding Bull Shipment Regulations

Cattle producers should be aware of trichomoniasis testing requirements prior to moving cattle. The Arkansas Livestock and Poultry Commission is the governing body that sets and enforces such requirements. For the current trichomoniasis testing movement requirements, contact the Arkansas Livestock and Poultry Commission (www.arlpc.org) or your local veterinarian.

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