



Cattle Producer's Handbook

Animal Health Section

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Trichomoniasis

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Trichomoniasis, or “trich,” is a sexually transmitted disease of cattle caused by the protozoan parasite, *Tritrichomonas foetus*. Trich causes infertility, early embryonic death, and abortions resulting in a high percentage of open cows, which has major economic impact.

Trich is a common disease in the western states, especially in those areas using shared public lands for grazing. Most states west of the Mississippi River have regulations set in place to help control the spread of this disease. These regulations are state specific and can be found by contacting the individual state's department of agriculture or livestock.

The bull is the long-term carrier of this infection but usually exhibits no clinical signs. The organism lives in the tissues lining the penis, prepuce, and sheath. Trich can be transmitted to the vagina of the cow at breeding, which then spreads, allowing infection to develop in the uterus. The initial infection usually does not interfere with conception but rather, results in death and resorption of the embryo 30 to 90 days later.

There is no treatment for trich; and although some bulls may clear the infection, it is recommended or required that bulls be tested and positive bulls be sent to slaughter. Literature about trich often indicates a major resistance of young bulls to trich compared to older bulls. This concept is valid; however, young bulls can be infected. In Utah, this was recognized when testing of bulls became mandatory. Of 131 positive bulls, 19 would have been considered “virgin” by their owners.

Obviously, bulls are getting exposure to trich through breedings that their owners are unaware of or have forgotten. Some of this breeding may have occurred by young bulls mounting infected cows before they are weaned from their dams. Not all of these young bulls cleared the infection.

In the cow, infertility may persist for 2 to 6 months, after which an immune response eliminates the infection

in most females and pregnancy can be established. There is no persistent immunity after infection, and cows may be re-infected later. Rarely, a cow may remain infected but still deliver a normal calf. These cows are a source of infection for bulls in the following breeding season.

Some infected females develop pus in the uterus (pyometra) and may not cycle for some time. Once they do begin to cycle, they would be highly contagious until the infection clears. Cull cows should be sold directly to slaughter and never housed with bulls, as this puts the bulls at high risk. The greatest threat for spreading trich to a new herd is mixing the herd with infected cattle or the purchase of open cows or previously used bulls.

Diagnosis

Sample Collection—The diagnostic sample necessary for trich testing in the bull is the smegma (oily secretions and skin cells) that collects in the prepuce. Several methods are described for collecting this sample including brushing, swabbing, washing, and scraping. Scraping is the most commonly used method in the United States. Scraping is performed using a sterile artificial insemination (A.I.) pipette attached to a syringe. The pipette is inserted into the prepuce as far back as possible and scraped multiple times along the lining. Suspect cows can also be tested by collecting samples of cervical mucus with an A.I. pipette.

The trich organism may be shed only intermittently, so multiple testing will greatly increase the opportunity to find and remove all the positive bulls. Research data estimates that one test will find 80 to 90 percent of infected bulls; two tests will find 90 to 95 percent; three tests will find 95 to 99 percent.

Testing all herd bulls three times is critical for eradicating trich from a herd, whether it is a single owner or communal grazing herd. Ideally, cows should be