What is trichomoniasis?

Cattle trichomoniasis or "Trich" is a venereal disease of cattle caused by the *Tritrichomonas foetus* protozoa, which is about the size of a sperm. Infected bulls carry the organism on their penis and prepuce. Trichomoniasis is then transmitted to cows through breeding. Cows may abort early in the pregnancy and become temporarily infertile. Only testing will confirm the presence or absence of the disease.

Transmission

*T. foetus* is fragile and cannot survive in the environment (outside the animal). Transmission of the disease is primarily by sexual contact, but mechanical transmission by insemination instruments or CIDR (Controlled Intravaginal Drug Release) can occur. Venereal transmission can occur from an infected bull to an uninfected cow (or heifer), or from an infected cow (or heifer) to an uninfected bull. However, most cows clear the infection spontaneously and are not significant reservoirs for disease transmission. Bulls are the main reservoir of the trichomoniasis, and bulls greater than 3 years of age tend to be long-term carriers. For this reason, samples from bulls are preferred for diagnosing and controlling the disease in cattle herds.

Clinical Signs

Chronically infected bulls show no lesions or clinical disease. Infected bulls appear normal, breed normally, and can infect an entire herd through natural service. In the newly infected cow or heifer (in those never before infected with *T. foetus*), there is inflammation of the reproductive tract (vagina, cervix, uterus), which may result in a discharge from the vagina or, in severe cases, pyometra (uterus distended with pus and the cow’s inability to cycle). If the cow is pregnant, the infection results in placentitis (inflammation of the birth membranes) and causes early abortion (1-16 weeks of gestation).

Your cow herd may be Trich-infected if:

- NO systemic signs/ illness and you see cows showing signs of estrus when they should be bred
- A disproportionate number of open cows at pregnancy check
- Late abortions
- Extended calving season
- Mild to severe pyometra in some, but not all, infected cows.

- Bovine trichomoniasis is a disease that causes reduced reproductive performance in cattle herds with no clinical illness
- Bovine trichomoniasis is a disease regulated by a number of western, southwestern and central states
- Control of trich in cattle herds requires culling of infected carrier bulls to slaughter only
- The required sample for "official" detection of trich in bulls is a preputial scraping taken by an accredited veterinarian who is proficient in the procedure
- Detection of infected carrier bulls requires laboratory testing and the recommended laboratory test for bovine trich is the PCR (polymerase chain reaction) test
**How do I know if my cattle herd has trichomoniasis?**

A tentative diagnosis of trichomoniasis as a cause of reproductive failure in a herd is based upon clinical history (presence of clinical signs in individual cows in a bull bred herd), signs of early abortion, repeated returns to service, high percentage of unbred cows, and irregular estrus cycles. Confirmation of trichomoniasis requires demonstration of \textit{T. foetus} parasites by laboratory testing.

**How do I get trichomoniasis out of my cattle herd or prevent it from entering my cattle herd?**

Cows with trichomoniasis usually clear infection in 90-95 days and are not a source of \textit{T. foetus} infection from one breeding season to the next. Bulls (≥ 3 years of age) become chronically infected with \textit{T. foetus}, are long-term carriers and can serve as the source of trichomoniasis in cattle herds from one breeding season to the next. Thus control of trichomoniasis in cattle herds requires identification of bulls infected with \textit{T. foetus} by laboratory methods and removal of the infected bulls from the herd. Also, testing all purchased bulls for \textit{T. foetus} before entering the herd will prevent introduction of trichomoniasis into your herd. There is no effective method for treating \textit{T. foetus}-infected bulls. Infected bulls are generally culled from the herd and sold for slaughter.

**Trich management plan can include:**

1. Maintain a young bull battery.
2. Conduct a fertility exam and culture all bulls before the breeding season.
3. Purchase only virgin, yearling bulls.
4. Do not share or lease bulls.
5. Do not purchase older cows and add them to your herd.
6. Cull open cows.
7. Maintain a defined breeding season to identify reproductive problems (< 90 days).
8. Pregnancy test all cows and heifers 120 days after the breeding season and cull open females.
9. Keep fences in good repair to keep your neighbor's herd out.
10. You may elect to vaccinate, but vaccine alone will not prevent the disease from getting into the herd.

**Trichomoniasis risk factors:**

- Natural service
- Leased or borrowed bulls
- Large herd (>500 head)
- Bad fences
- Shared grazing areas
- Reusing CIDRs
- Failure to sterilize CIDR applicators between animals
- Failure to isolate and test purchased animals

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1 A virgin bull is one that has never bred a cow and has never been pastured or housed with a bull that has bred a cow.