Bayou BEEF TIPS
LSU AgCenter Research & Extension

Bovine Trichomoniasis

Trichomoniasis is a bovine venereal disease that can cause substantial reproductive and economic losses in cow-calf operations that use natural service. The disease is caused by the protozoan *Tritrichomonas foetus* (*T. foetus*), and is commonly referred to as 'Trich'. Bulls can become chronic, asymptomatic carriers of *T. foetus*, because the organism can live in the microscopic folds of a bull's penis and prepuce. Infections in cows can result in early embryonic death, abortion, pyometra (pus-filled uterus detected at pregnancy exam), or infertility, influencing the reproductive performance and economic profitability of a cow-calf operation. Many states, including Louisiana, now have regulations on movement of bulls to prevent the spread of trichomoniasis.

How does trichomoniasis affect a cattle herd?

- Repeated breeding that results in long, drawn-out breeding and calving seasons.
- A high percentage of open cows at pregnancy examination, or detection of a wide range of gestational ages. Most embryonic/fetal loss occurs during the first trimester, and late term abortions are not common with trichomoniasis. Therefore, most reproductive losses are not detected until pregnancy exam or calving season.
- Pyometra(s) detected at pregnancy exam; this typically occurs in less than 5% of animals.
- Bulls show no clinical signs, but can become carriers.
- Cows and heifers will rarely show a very mild vaginal discharge, but this is usually never noticed. Therefore, like the bull, there are typically no initial clinical signs that a cow or heifer is infected with *T. foetus*.
- Cows and heifers can usually clear the infection in 2 to 6 months (sometimes longer), but usually not before sustaining some type of reproductive loss.

With so few noticeable clinical signs of trichomoniasis it is important to view a herd's overall reproductive performance to look for any indication of a problem. Trichomoniasis should be suspected, along with many other culprits, any time herd reproductive performance declines in a natural service herd. In herds with new infections the results can be devastating, with a long, drawn-out calving season and only a 50-70% calf crop. In herds where trichomoniasis has gone undetected for a long time, the results may be less dramatic because of temporary herd immunity. In such cases, the calf crop may only drop 5-10%, which is still enough to have a substantial economic impact.

Economic impact

- Loss of calf crop due to early embryonic loss or abortion.
- Loss of weaning weight due to delayed conception and late calving (since calves are born later in the season and then sold at lighter weights).
- Culling of open cows and infected bulls.
- Replacement of valuable breeding stock (i.e. open cows and infected bulls).

Risk factors associated with trichomoniasis

- Natural service
- Using leased or borrowed bulls, or introducing any 'non-virgin' bulls into a herd without prior testing

- Large herd size (smaller herd size decreases exposure potential)

Transmission

Tritrichomonas foetus is transmitted when an infected bull breeds a susceptible cow or heifer, or when a susceptible bull breeds an infected cow or heifer. Very rarely is *T. foetus* ever transmitted by contaminated semen or artificial insemination (AI) equipment, especially if semen is purchased from reputable AI studs and used with hygienic AI techniques. Reputable AI studs have strict biosecurity and quality control measures in place to ensure that their bull semen is not contaminated with *T. foetus*. So, AI using hygienic techniques with bull semen from a reputable source is an excellent way to prevent the introduction of *T. foetus*, although AI may not be practical in larger herds.

Treatment

Trichomoniasis is usually self-limiting in cows and heifers (they will usually clear the infection in 2 to 6 months), as opposed to bulls that typically become chronically infected carriers. Unfortunately, one of the complicating factors associated with trichomoniasis is that there are currently no effective treatments with Food and Drug Administration approval.

Prevention of trichomoniasis

- When possible, avoid grazing cattle on public lands where both bulls and cows have a much greater risk of exposure through coitus with other *T. foetus*-infected animals.
- Utilize artificial insemination when possible.
- Cull all open cows and heifers.
- Control animal movement into a herd. Maintain good fences to prevent *T. foetus*-infected animals from inadvertently entering a herd, or to prevent uninfected animals from temporarily entering a *T. foetus*-infected herd and then returning with *T. foetus* to their uninfected herd of origin.
- Purchase only virgin bulls and heifers as replacements.
- Maintain as young a bull battery as possible.
- Consider immunization against *T. foetus* in high-risk herds.
- Purchase replacement animals from reputable sources and test appropriate animals prior to introducing them to the herd.

Control of trichomoniasis in infected herds

- Test and cull all infected bulls. Infected bulls should be sold for slaughter only.
- Test bulls for *T. foetus* at least once before introducing them into a new herd. The test should be performed after two weeks of sexual rest. Ideally, a bull should have three negative cultures at weekly intervals.
- Utilize artificial insemination when possible.
- Reduce the breeding season to 60-90 days and cull all open cows and heifers. If there are too many open cows for culling to be economically feasible, then open animals should be separated and maintained as a separate herd.
- Culture all pyometras diagnosed in cows or heifers during pregnancy examinations.
- Submit all aborted fetuses and placental tissue to a diagnostic laboratory.
- Vaccinate against *T. foetus*.

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