

# University of Tennessee

## Department of Animal Science

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### Bovine Trichomoniasis: Fact Sheet for Tennessee Producers

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**What do I look for in an infected herd?**

Infected cattle usually appear and act normal without any outward signs of infection. The first indication of an infected herd will be when cows are examined for pregnancy and too many cows are open (not pregnant), or there is a strung out (prolonged) calving season, or a reduced calf crop (low birth rate).

Cows and heifers become infected during natural service by an infected bull. The organism then colonizes the reproductive

tract (uterus and vagina) within one to two weeks. Pyometra and abortion are often the first physical signs that are noticed in a herd, but these signs occur in less than 5 percent of infected animals. Infertility due to embryonic death is the most economically damaging consequence and occurs in a large percentage of infected cows. A majority of cows will “clear” the infection in a three to four month period of time with sexual rest. These cows will rebreed and carry a calf to term, but calve much later in the birthing season. A small percentage of cows (less than 1 percent) will fail to clear the organism and will be a source of infection to bulls from one season to the next.

Susceptible bulls become infected when breeding infected cows, or breeding a cow soon after an infected bull breeds the same susceptible cow. Younger bulls (less than 3 years) may clear the infection, but older bulls (more than 5 years.) tend to become chronically infected. The organism resides in the epithelial folds of the prepuce of bulls and currently there is not an approved treatment that has been shown to clear the infection from bulls. Bulls that have never been used for breeding and not exposed to breeding cows (virgin bulls) are unlikely to harbor trich.

### **What is the economic impact?**

The economic impact of trichomoniasis has five main factors: (1) reduced calf crop due to early embryonic loss or abortion; (2) reduced weaning weight due to delayed conception; (3) culling and replacement of infected cattle; (4) loss of bulls due to culling of infected bulls, and (5) genetic losses from culling infected cattle. Losses to the U.S. beef industry exceed \$100 million annually.

### **How can “trich” be diagnosed?**

Testing of cows is often not useful because the cow’s immune response clears the organism from the reproductive tract. Thus, trich testing for control and prevention is focused on testing of breeding bulls. Infected bulls serve as reservoirs and transmitters for the organism. Identification of infected bulls is vital to prevent entry of trich into breeding herds and control the spread of this reproductive disease. Testing must be done by accredited veterinarians who have been specially certified to collect samples for trich testing. Producers and bull sale managers should contact a veterinarian to arrange testing well in advance of the sale or usage of newly acquired bulls

### **Is there a treatment?**

Unfortunately, there is not an effective FDA-approved treatment. A vaccine is available for cows and heifers and this vaccine should be administered annually four to eight weeks prior to breeding. Studies on the effectiveness of vaccines in bulls vary and therefore vaccination should be discussed before implementing bull vaccination programs.

### **How do I control, or better yet prevent trichomoniasis?**

An ounce of prevention is worth more than a pound of cure in this situation. Work with

your herd veterinarian to develop a breeding management program, which can be combined with a herd health program for prevention. A few of these tips are:

- Test all bulls entering the herd, especially leased or borrowed bulls.
- Test bulls annually 30 days prior to introduction to the breeding herd.
- Replacement bulls should be chosen from groups never previously used for breeding or exposed to breeding age cows (virgin bulls).
- Maintain good fences to prevent introduction of neighboring bulls.
- Have a defined breeding season to improve the ability to detect abnormal calving seasons.
- Pregnancy check all breeding heifers and cows early to detect embryonic loss.
- Cull open females that failed to breed.
- Choose replacement heifers from groups not having been exposed to bulls previously (virgin heifers).
- Consider yearly tritrichomonas fetus vaccinations four to eight weeks prior to breeding.

### **Tennessee Regulations (Effective January 2012)**

Requirements for breeding bulls entering Tennessee: Bulls entering Tennessee from any state must be accompanied with a certificate of veterinary inspection (CVI), have been tested negative for trichomoniasis within 30 days of entry to Tennessee, and be identified with an official identification device. Acceptable ID devices include silver metal USDA tags, 840 RFID tag, registration tattoo, and registered brand if accompanied by a copy of the registration papers. Exceptions are:

- Bulls less than 24 months of age that can be certified as virgin bulls.
- Bulls consigned directly to slaughter.
- Rodeo or bucking bulls that travel to an event and then leave the state without residing on any farm.

An acceptable “test negative bull” is defined as having had three negative culture tests (IN-Pouch Test) done at weekly intervals and starting after a minimum of one week sexual rest, or one negative PCR test.

### **Requirements for infected bulls**

Bulls in the state of Tennessee that have been tested and found to be positive:

- Are to be reported to the state veterinarian within 24 hours by the approved lab.
- Must be immediately separated from the herd, isolated and retested as soon as possible.
- Can only be moved with a USDA permit directly to slaughter.

Additionally, all breeding bulls comingled with a trichomoniasis positive bull at any period within the last six months and any breeding bull comingled with females exposed to a positive bull will be quarantined and tested as determined by the state veterinarian.

### **Additional information**

More information on management of the disease can be obtained from your local veterinarian, the University of Tennessee Department of Animal Science, or the University of Tennessee College of Veterinary Medicine (<https://vetmed.tennessee.edu/vmc/FarmAnimalHospital> or 865-974-8387).

For more information about trichomoniasis rules and regulations, contact the State Veterinarian’s office at 615-837-5120 or [animal.health@tn.gov](mailto:animal.health@tn.gov). Trichomoniasis rules and regulations can also be found at <http://www.tn.gov/agriculture/publications/regulatory/trichomoniasis.pdf>.

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