



South Dakota

Animal Industry Board



BOVINE TRICHOMONIASIS

A contagious venereal protozoal disease of cattle
A REPORTABLE DISEASE IN SOUTH DAKOTA

Cause: The causative organism is a one-celled parasite (protozoan) Tritrichomonas (Trichomonas) foetus.



Spread: The organism is located only in the genital tract of the cow and bull. Over 90% of females serviced by a diseased bull may become infected. Transmission by AI is possible but very unlikely because of the methods of sire hygiene during semen collection and with the addition of antibiotics to the semen diluents. It may be assumed that the transmission occurs only during coitus and that most bulls remain permanently infected. The infected cow usually recovers spontaneously. Rarely, a cow may remain infected throughout pregnancy and discharge trichomonads from the genital tract following calving. Infected cows that undergo 90 days of sexual rest after calving with normal involution of the uterus may be assumed to be free of the disease. Any immunity from this infection is not long lasting and re-infection does occur.

Signs of Disease in a herd: The most characteristic sign is infertility. Usually the death of the fetus occurs 50-100 days after conception. Many of these early fetal losses are not apparent. Those cows that abort during the third month of pregnancy may show a recognizable abortion. Cows that carry their calves past the fourth month usually deliver a live calf. The end result is numerous open cows and a lot of late bred cows during pregnancy testing. Quite often you find the herd bulls run down and sexually exhausted from the breeding intensity. You may also find some postcoital pyometra in the cows but this usually occurs in less than 5% of the animals.

Diagnosis: A tentative diagnosis may be based on the history and clinical signs. To confirm this diagnosis depends on finding the organism in at least one animal in the herd. This is done by an official Diagnostic Laboratory; a) finding the organism in an aborted fetus, b) culturing the organism from a vaginal tract swab of a cow or from the pyometral discharge from a cow, c) and/or finding the organism or DNA in a smegma sample collected from the inside sheath around the penis of one of the herd bulls.



Report: All Confirmed cases are reportable.

Testing: Samples for culturing must be processed at an official Diagnostic Laboratory. Veterinarians can obtain the culture “pouches” or special transport media tubes from the Diagnostic Laboratory or through other commercial channels. Any suspicious case should be submitted to the official Diagnostic Laboratory.

Prevention: As with all diseases, prevention is easier than cure, **consult your veterinarian**. Be cautious on purchasing replacement females and bulls. **Don’t buy** cows from areas where the **disease** is present. Purchase virgin or properly tested bulls. Watch fences so cattle don’t mix with high risk neighboring cattle.

Treatment and Control: Herd management is critical for control. **Consult your veterinarian.**



- A. **Culling Herd Bulls:** If possible it is best to sell all of the herd bulls **to slaughter** and replace them with virgin bulls each year. If this is not possible, the herd bulls should all be tested for the organism. Each bull has to have at least three negative culture tests or one negative PCR test to be considered negative. Any bull that tests positive needs to be culled and sold **to slaughter**.

- B. **Culling Cows:** All open cows and any cows that lose their calves during calving are culled and sold **to slaughter**. ONLY COWS WITH THEIR OWN CALF AT SIDE GO TO PASTURE.

- C. **Records:** Keep track of specific bulls and specific cows that are kept in each pasture. (This is a means to detect if a carrier cow got through your management program and caused a subsequent flare up.)



- D. **Vaccination:** There is a vaccine that allows you to live with the disease condition but it does not eliminate the carrier animal. The only way one can eliminate this disease is to use good management practices. The use of vaccine may complicate this procedure and extend the time for eliminating Trichomoniasis from your herd.
- E. Consider using artificial insemination exclusively.
- F. No antibiotics or drugs are approved for use in food animals as treatments or preventatives.

Reportable Disease: All confirmed cases of Tritrichomonas foetus are reportable to the State Veterinarian [call (605) 773-3321]. This disease is not quarantinable.

South Dakota Trich Rules: South Dakota has implemented the following rules to help control the spread of the disease:

Importation requirements for bulls

(12:68:27:01) Any bull entering South Dakota must meet the following import requirements for trichomoniasis control:



1. The bull must be accompanied by an official certificate of veterinary inspection as defined in SDCL 40-14-2; and
2. The following statement must be on the certificate of veterinary inspection: "The bull(s) identified on this certificate have been tested and found to be negative for trichomoniasis by testing conducted by a laboratory accredited by the American Association of Veterinary Laboratory Diagnosticians. The testing must be by methods approved by the board and may be by isolation of the organism or polymerase chain reaction (PCR).



Exemptions to the importation requirements of § 12:68:17:01

(12:68:27:02) The following bulls entering South Dakota are exempt from the provisions of § 12:68:27:01 providing such exemption qualifications are stated on the official certificate of veterinary inspection:



- (1) Virgin bulls;
- (2) Bulls imported to South Dakota for feeding or slaughter only;
- (3) Bulls imported to South Dakota to be held in confined dairies as determined by the board;
- (4) Bulls imported for exhibition or rodeo purposes and held in confined facilities to prevent breeding as determined by the board; and
- (5) Bulls imported as part of seasonal grazing operations and not changing ownership as determined by the board, following a risk assessment.

Intrastate trichomoniasis testing requirements for bulls (12:68:27:03)

The following intrastate trichomoniasis testing requirements apply to bulls:

- (1) Any owner or operator adjacent to or exposed to a herd that has confirmed trichomoniasis shall test any animals in the herd as directed by the board. The board may quarantine the entire herd until the testing has been completed to the satisfaction of the board;



- (2) Any nonvirgin bull sold, loaned, or leased in South Dakota for breeding purposes must be tested negative for trichomoniasis by testing conducted by a laboratory accredited by The American Association of Veterinary Laboratory Diagnosticians. The testing must be by methods approved by the board and may be by isolation of the organism or polymerase chain reaction (PCR).
- (3) Any bull sold, loaned, or leased for the purposes of feeding, slaughter, use in confined dairies, rodeos, or exhibitions is exempt from the requirements of subdivision (2) of this section. The board shall determine eligibility for any such exemption.

Trichomoniasis control requirements for females (12:68:27:04) No nonvirgin and nonpregnant female cattle may be imported, loaned, leased, nor acquired for breeding purposes in South Dakota. However, nonvirgin and nonpregnant female cattle registered with a breed registry, or to be used in confined dairy operations, may be exempt from the provisions of this section as determined by the board. Nonvirgin and nonpregnant female cattle, each accompanied by its own offspring and prior to rebreeding are exempt from the provisions of this section. Nonvirgin nonpregnant female cattle used in embryo transplant operations may be exempt from this section based upon risk assessment by the board.



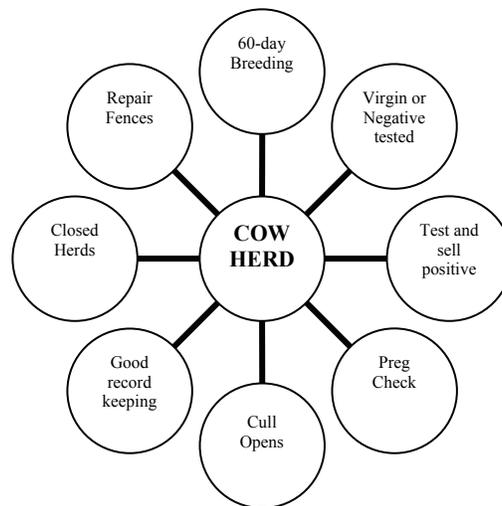


Biosecurity – How's Yours?

A disease outbreak can be financially devastating in any herd. A biosecurity plan can identify practical and sensible prevention and control measures to maximize disease resistance and minimize herd exposure to infectious agents.

Three principle items of biosecurity apply for the management of trichomoniasis:

1. Prevent introduction of infected cattle - Ask questions.
2. Decrease herd exposure to infectious diseases - Clean animals and good fences.
3. Management through isolation, testing and record keeping.



Good management appears to be the best means to eliminate and prevent this disease. Cattlemen are encouraged to be proactive and implement good management practices to protect the health of their herds.

For more information **contact your local veterinarian** or the State Veterinarian's office in Pierre.



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