



Bovine trichomoniasis: How to get timely and accurate results from diagnostic testing



Protecting Animal and Human Health through Diagnostics

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Practitioners and producers are asking TVMDL for more information about achieving timely and accurate results from diagnostic testing for *Trichostrongylus axei*, the parasite that causes bovine trichomoniasis. Here are some important guidelines for shipping, incubating and pooling samples for these tests, as well as a brief history of the state's program for controlling bovine trichomoniasis.

Shipping and incubating samples

TVMDL employs the most current technology available utilizing real-time polymerase chain reaction (PCR) testing. As with all diagnostic tests, strict attention to detail in collecting and handling samples helps to ensure an accurate diagnosis:

- Practitioners or producers who ship samples to TVMDL should make sure they use collection pouches that have not expired.
- Because the PCR test is based on molecular biology, strict attention to avoid cross contamination between samples should begin at collection. All samples should be collected in as clean a manner as possible. Avoid allowing blood and fecal matter into the collection pouch.
- Protecting the sample from extreme weather or exposure to sunlight while at chute side is imperative. You can minimize temperature extremes in shipment by adding a cold pack (protect from direct contact to pouches) in hot weather and by ensuring adequate insulation in cold weather.

TVMDL recognizes the need to provide producers and practitioners with turn-around times that are as brief as possible, and its laboratories strive to meet this standard every day. However, the process of a specific diagnostic test occasionally put limits on how quickly TVMDL is able to produce an accurate result. When testing for *Trichostrongylus axei*, for example, samples are required to be incubated at 37° C (98.6° F) for 48 hours prior to testing.

You can ship samples to either of TVMDL's full-service facilities in Amarillo or College

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About TVMDL: The Texas A&M Veterinary Medical Diagnostic Laboratory protects animal and human health through diagnostics.

An agency of the Texas A&M University System, TVMDL comprises two full-service laboratories, in College Station and Amarillo, and two poultry laboratories, in Center and Gonzales.

TVMDL is among 12 core laboratories in the National Animal Health Laboratory Network, a group of state and regional laboratories designed to provide a nationwide surge testing, response, and recovery capacity in the event of an animal disease outbreak.

• **TVMDL-College Station**

PO Drawer 3040
College Station, TX 77841-3040

1 Sippel Road, TAMU 4471
College Station, TX 77843-4471

Tel. 979.845.3414
Fax. 979.845.1794

• **TVMDL-Amarillo**

PO Box 3200
Amarillo, TX 79116-3200

6610 Amarillo Blvd. West
Amarillo, TX 79106

Tel. 806.353.7478
Fax. 806.359.0636

• **TVMDL-Gonzales**

Sam and Sally Glass
Poultry Diagnostic Laboratory
PO Box 84
Gonzales, TX 78629

1162 East Sarah DeWitt Dr.
Gonzales, TX 78629

Tel. 830.672.2834
Fax. 830.672.2835

• **TVMDL-Center**

635 Malone Dr.
Center, TX 75935

Tel. 936.598.4451
Fax. 936.598.2741

Station. Samples should arrive at TVMDL within 48 hours after collection. If this is not practical, samples may be incubated at 37°C (98.6°F) for up to 48 hours at the practitioner's facility. Incubated samples should arrive at TVMDL no later than 120 hours after collection. Additional incubation will not be required at the laboratory.

When practitioners choose to incubate pouches prior to shipment, they should indicate this on their submission form to TVMDL or on their official trichomoniasis test record. Without that indication, the laboratory will incubate the samples for 48 hours as a matter of procedure.

Pooling samples to reduce costs

TVMDL has learned from peer-reviewed publications and our laboratory experience that pooling up to five properly handled samples is an effective method for reducing the costs of diagnostic testing for *Tritrichomonas foetus*. Please note that pooling for regulatory diagnostics requires prior approval from the state veterinarian's office.

Samples must be collected and shipped individually to the laboratory. We will handle the pooling at the laboratory.

If a pooled sample results in a positive test, TVMDL will test the individual samples to identify which animals are the cause – unless the practitioner indicates on the submission form that TVMDL should not conduct these individual tests. Without the individual tests, all bulls in a positive pool are required by the state to go to slaughter.

History of trichomoniasis control in Texas

The program got its start in 2008, when the Texas beef cattle industry realized that bovine trichomoniasis poses an economic threat to producers. The industry asked the Texas Animal Health Commission (TAHC) to consider launching a trichomoniasis control program.

In response, TAHC organized the trichomoniasis working group, which includes representatives from livestock commodity groups, the Texas AgriLife Extension Service, the Texas A&M University College of Veterinary Medicine & Biomedical Sciences, the Texas Veterinary Medical Association and TVMDL.

The working group recommended a two-stage program. As a first step, the state established testing requirements for bovine males of breeding age entering the state. This went into effect on April 1, 2009. The second stage of the program added testing requirements for bovine males of breeding age changing possession within Texas. It went into effect Jan. 1, 2010.

The program emphasized PCR testing as the preferred methodology. The state selected TVMDL's full-service laboratories in Amarillo and College Station as the primary testing facilities.

Overall, the program has been very successful, embraced by the livestock industry as well as the veterinary profession. The program is also very dynamic. The working group meets annually to review the program and recommend changes to TAHC.

Got questions about diagnostic testing for animal diseases? For answers, call any of TVMDL's four locations listed at left.

Suggested online resource:

- Texas Animal Health Commission's web site, http://www.tahc.state.tx.us/animal_health/trich/trich.html