

Stemming the Spread

Small ruminants are easy prey for *Corynebacterium pseudotuberculosis*



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“Lympho” and “Cheesy gland” are common names used by livestock owners and veterinarians for caseous lymphadenitis (CL), a bacterial disease that affects small ruminants such as sheep and goats. A worldwide problem, CL is caused by *Corynebacterium pseudotuberculosis* and once endemic on a farm is difficult to eradicate.

Primarily a disease of economic importance in small ruminants, CL can infect and cause clinical disease in horses, cattle, swine, fowl and other animals as well. Two biotypes of the bacteria exist with one biotype affecting small ruminants and another affecting horses. Cattle seem to be susceptible to both biotypes. Humans are rarely infected.

The disease can occur as both external and internal abscesses. Most often, economic losses mount due to the internal form of the bacteria, which causes abscess formation in the thorax or abdomen. This form should be considered in the differential diagnosis as a possible cause of the “thin ewe syndrome.” The external form of the disease causes abscesses to form at the point of entry or in regional lymph nodes. Animals with superficial abscesses are usually not clinically ill. These abscesses will eventually rupture, or need to be lanced, and discharge pus making this an aesthetically displeasing condition. These animals should be isolated if possible in a stall that can be disinfected. The pus contains the *C.pseudotuberculosis* bacteria which can survive on hay, straw and wood for up to two months; it can survive in soil for up to eight months. The organism may be present in milk if the mammary lymph nodes are affected.

CL infects livestock by penetrating the skin or mucous membranes, often through a scrape, puncture or injury from shearing, tagging, or an environmental hazard such as a protruding nail. It can be transmitted from one animal to many through communal dips, as *C.pseudotuberculosis* can survive in dipping solution up to 24 hours and contaminated shearing equipment.

The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) in College Station runs serologic tests that producers and practitioners can use to determine if a herd is CL negative or positive. Both the Amarillo and College Station labs can perform a bacterial culture. Prior to introducing new animals to a herd, it is wise to screen the existing animals for CL using serology, even though there are no clinical signs of the bacterial disease.

- Caseous lymphadenitis screen ((synergistic hemolysis inhibition (SHI) test)); requires 1 cc serum; \$8.00 per specimen. If an animal tests positive, TVMDL will run a titer at extra cost.
- Caseous lymphadenitis titer (SHI); 1 cc serum; \$10.00 per specimen.
- Bacterial anaerobic culture; fresh chilled tissue or swabs; \$18.00 per specimen.

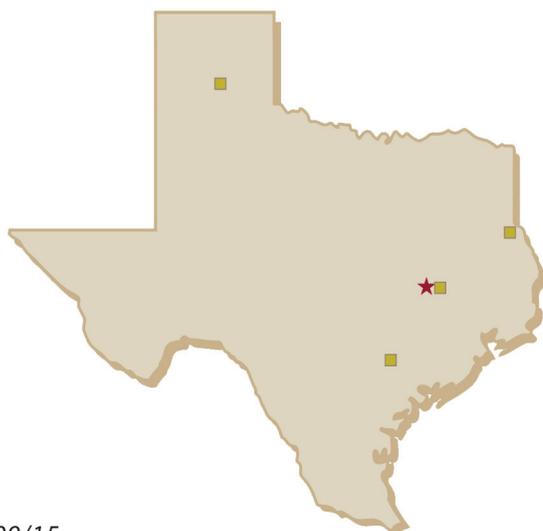
The screen is best used to find out if the flock or herd is infected, rather than diagnose one individual. The tests will not differentiate whether the positive is due to vaccination titers or if the animal is

naturally infected. There are commercial CL vaccines available for sheep and goats.

The vaccine may help reduce the prevalence of CL within a flock but will not prevent all new infections or cure existing infections. Consult a veterinarian to discuss vaccine usage in your flock, especially before using the vaccine in a naïve flock. Vaccinated animals will often have a positive serological test result that is indistinguishable from an infected animal.

CL is not a curable disease; even with treatment, abscesses may recur. It is best to consult a veterinarian prior to vaccinating or attempting treatment of abscesses. Producers can reduce the risk of potential CL infection by removing exposed nails, sharp-edged feeders or other hazards from pens. Additionally, instituting bio-security steps such as not sharing shearing equipment between flocks can reduce introduction and spread of the disease.

For more information on this disease, contact a small ruminant veterinarian. Contact TVMDL at **tvmdl.tamu.edu** or call the College Station laboratory toll free at **888.646.5623**.



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.

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