



Wyoming State Veterinary Laboratory Newsletter Vol 2(#1): April, 2001

Wyoming State Veterinary Laboratory

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University of Wyoming

WSVL News

Message from the Director:

We hope this finds you all well. The WSVL has been busy as many of you have been with the calving, lambing, and foaling seasons. Although no major trends have appeared, the WSVL is seeing scours cases in calves. Most of the cases are initiated by rotavirus or coronavirus in the youngest calves. *Campylobacter jejuni* and *Cryptosporidium* often complicate cases initiated by the viral pathogens. A couple of cases of salmonellosis have been found, one of which was caused by a multiple-antibiotic-resistant strain of *Salmonella*. We have also identified a couple of cases of purple gut (*Clostridiosis*). If you are treating a herd with scours, remember that many scours agents (e.g. *Salmonella*, *Cryptosporidium*) may also cause severe illness in people. In addition, scours is transmissible to other cattle and ranches. Thus, it is important that we separate the scours cases from healthy animals. Be sure to feed/treat the scours animals after you have worked your normal animals. Wash and disinfect all instruments, clothes, boots and other tools after handling the sick calves. It is also especially important to clean up carefully before entering the house and having contact with family members.

As suggested by our industry Advisory Council, we have embarked on a marketing effort. This newsletter and putting the WEB page together were initial steps in the effort. This semester we engaged a student intern from the University of Wyoming College of Business. Stephanie Schara is our intern. She prepared a survey to complete regarding our services. We really do appreciate your ideas and hope you have the time to take a minute and fill it out. We have already received some helpful feedback. Stephanie is also working on a brochure and has put together this newsletter. We intend to approach the College of Business about continuing this program.

This issue of the *WSVL News* has information about recent cases, an outbreak of Q-Fever, and some information about foot and mouth disease (FMD), which is currently devastating the livestock industries in the United Kingdom, Ireland, parts of the European Union, and Argentina. We have links via our WEB site to the USDA, MAF and others if you would like additional information about the disease. Be aware that the news media, and many interest groups, have confused FMD with the ongoing problem in the EU with bovine spongiform encephalopathy ("mad cow"). The diseases are vastly different from one another and we must be mindful of the differences.

As a reminder, please note that the UW campus will be moving to summer business hours of 7:30 AM to 4:30 PM starting May 14, 2001. Regular hours (8 AM to 5 PM) will resume September 3, 2001 (Labor Day holiday). Thank you for your support, have a good spring, and please tell us how we are doing.

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Q-Fever Diagnosed in Wyoming

The Wyoming State Veterinary Laboratory recently diagnosed Q-fever in a herd of approximately 400 Boer goats from Northwest Wyoming. The ranchers became concerned when they noticed multiple abortions in the herd. Three stillborn kids were submitted to the laboratory. Dr. Todd Cornish led the examination of the animals. The herd had experienced several abortions, stillbirths, and births of weak and unthrifty kids. Although the signs are common to several different potential causes, a necropsy revealed lesions that could be due to either chlamydiosis or Q-fever. Immunohistochemistry testing confirmed the presence of *Coxiella burnetii*, the cause of Q-fever. Historical investigation revealed that the goats had originated in Texas approximately 1 year ago. Q-Fever is common in Texas. This is the first known identification of Q-fever in Wyoming.

Due to the exotic nature of Q-fever in Wyoming, Dr. Jim Logan, the State Veterinarian, was notified. Dr. Logan notified the State Department of Health since Q-fever may be transmitted to humans. The State Department of Health subsequently reported the case to the Centers for Disease Control and Prevention (CDC). The CDC indicated a desire to investigate further since Q-fever is a reportable disease in people (the law requires such notification).

Representatives from the CDC, State Department of Health, and USDA, along with Dr. Cornish traveled to the ranch to investigate the outbreak. Because Q-fever rarely produces signs other than abortion, stillbirths, and weak kids, little was found to be out of the ordinary on the farm. The team gathered blood samples from 50% of the animals in the herd in an attempt to determine how many goats were infected. Additional blood samples were obtained from llamas and dogs. "Our team was also there to answer the rancher's questions and help them where we could," said Cornish. Subsequent testing of blood samples revealed that approximately 40 to 45% of the goat herd and one dog had experienced the infection. All individuals who came into contact with the disease were also tested. To date, no infections were reported in those individuals.

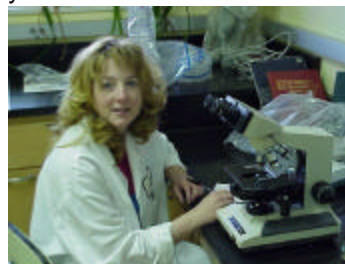
Q-fever, also known as Query fever, is a zoonotic disease, which means it is transmissible between animals and humans. The disease can be exchanged through inhalation of contaminated farmyard dust, unpasteurized milk, handling of infected tissues (especially placenta and aborted fetal tissues), and arthropod insect bites. The disease causes abortions, stillbirths, and weak newborns that are likely to die in animals. The disease does subside and affected animals will develop immunity to the agent. Thus, once a susceptible group of goats has suffered an abortion storm due to the disease, further abortions (in later seasons) are unlikely in those previously affected goats, including those exposed as youngsters. New additions to the herd may well be susceptible if they have never been exposed to Q-fever. Susceptible animals can be treated with tetracycline antibiotics to prevent abortion in the first year. Humans may experience fever, headaches, or nausea. People who work with sheep, cattle, or goats and experiencing those signs, and suspecting Q-fever, are encouraged to see their physician. The State of Wyoming currently requires no tests for Q-fever when importing livestock. "

Stephanie Schara, Intern & Todd Cornish, DVM, PhD, Diplomate ACVP tcornish@uwyo.edu

Schamber new to Laboratory

Robin Schamber is the newest member of the WSVL team. Robin is managing the diagnostic functions in Parasitology, Clinical Pathology, and Genetics/Molecular Biology testing. She earned her BS and MS degrees in Pathobiology here at the University of Wyoming, finishing her studies in 1994. She has experience in microbiology and molecular biology testing. She is a Wyoming native, having grown up in Riverton. Welcome aboard, Robin! Be sure to stop

and introduce yourself to Robin if you find yourself in Laramie.



Recent Cases and Trends

A recent series of bacterial abortions was reported in a herd of cattle due to *Arcanobacterium (Actinomyces) pyogenes*. A wide variety of bacterial pathogens may cause sporadic abortions in cattle. Such problems are usually specific to the individual animal, not necessarily the entire herd.

Calf scours in the state are mostly being diagnosed due to rotavirus or coronavirus in the very young calves. Some cases have been complicated by *Campylobacter jejuni*. Two herds have had *Salmonella sp* infections diagnosed in calves with scours.

Due to state rules, many bulls are being tested this spring for trichomoniasis. Thus far, approximately 1200 samples have been tested with only about 14 positive samples. All of the positive samples have come from Fremont County.

Foot and Mouth Disease

The serious nature of the potential spread of foot and mouth disease (FMD) has gained global attention due to the recent outbreaks in Europe and South America. The disease is present on a continuing basis in countries in Asia, Africa, and parts of South America. It is critical that livestock owners, those who work in agriculture, game and fish specialists, and the general public be knowledgeable about the potential risks of the disease.

Foot and mouth disease is a highly contagious, viral disease. It causes blistering of the mouth, hoof region, and udders in cloven-hoofed animals such as cattle, pigs, sheep, and wild animals such as deer and elk. Affected animals develop fever, lethargy, then foaming at the mouth and lameness (all from blisters). Severe, persistent weight loss and drops in milk production occur.

The highly contagious nature of FMD virus is a major reason it is so serious. Once an animal is exposed to FMD, it is likely to cause infection of the rest of the animals in the herd. Animals are exposed to the disease through nose-to-nose contact, contaminated feed and water, contaminated quarters and equipment, and from garbage. Humans can harbor the virus, but will not develop severe disease. However, the human can carry the virus for several days.

Currently, all live animals and improperly cooked animal products from affected regions are prohibited from entering the U.S. Travelers coming to the U.S. from infected areas will be screened upon entry as part of the Custom's process. Travelers should not be allowed onto a farm or ranch until after they have been away from rural or farming areas of affected areas for 5 days. Further precautions include disinfection of shoes and other potentially contaminated items, laundering of clothes, and even purchase of a separate pair of shoes for the visit in the U.S.

Currently the U.S. is FMD-free. Although the disease has posed a continuous risk for years, the nation has remained free since 1929. In addition to the Federal efforts, livestock owners and industry affiliates in Wyoming can do their part by being informed, carefully following recommendations about travelers and traveling themselves, and being aware of FMD so they can report it if it does appear. We must be on the alert to spot an outbreak in order to limit the impact in the event that FMD does appear. Signs to watch for include lethargy, lameness, drooling, and blisters on the mouth, teats, and hooves. Note that several other diseases share similar signs. Thus, panic is not warranted, but care should be taken to notify the appropriate veterinary authorities to test for the disease and rule it in or out promptly if signs do appear.

A watchful eye and preventative stance will help keep Wyoming FMD free and/or limit its impact if it does appear. Further information is available through links on our WEB site.

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To: