
What You Should Know About ***BRUCELLOSIS***



**Texas
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The Texas A&M
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What You Should Know About BRUCELLOSIS

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What Is Brucellosis?

It is a contagious disease of livestock and humans caused by the bacteria *Brucella spp.* It is also called Bangs disease or contagious abortion in livestock and undulant fever in humans.

How Serious Is Brucellosis in Cattle?

Infected cattle generally lose 20 percent of their milk producing ability. They have abortions, sterility problems and become slow breeders. Infected herds can have 40 percent fewer calves.

How Does It Affect Humans?

People infected with brucellosis have flu-like symptoms such as headaches, high fever, chills, sweats, joint pains, backaches, loss of weight and poor appetite.

How Do Humans Get Brucellosis?

The most common way is through contact with an infected cow's fluids associated with calving or abortion and the afterbirth. Unpasteurized milk from an infected cow may also cause human infection. Therefore, human brucellosis will be eradicated when brucellosis is eradicated in animals.

What Are the Symptoms of Brucellosis in Cattle?

There is no sure way to tell infected cattle by their appearance. The most outstanding symptoms in pregnant females are abortion, birth of weak calves and vaginal discharges. An infected cow may give birth to a normal calf and still pass on brucellosis.

How Do Cattle Become Infected with Brucellosis?

Cattle usually get the disease by sniffing or licking an aborted or full-term calf from an infected cow. Infection can also occur from eating feed or grass contaminated with brucella bacteria or exposure to excretions from the genital tract during or shortly after calving.

Can Cattle Get Brucellosis from Wild Animals?

Although some wild animals may become infected, they are not considered to be a reservoir host for bru-

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cellosis. Bison and elk can become infected and spread the disease. Coyotes can also become infected naturally; however, spread from coyotes to cows under field conditions still has not been proven.

Is the Infected Bull Important in the Spread of Brucellosis?

Bulls breeding by natural service are not an important means of transmission. Infected semen from bulls used in artificial insemination may infect cows.

Are Streams and Ponds an Important Source of Infection?

Watersheds and ponds may play an active part in the spread of the disease because they are ideal places for congregation of cattle.

What Does the Phrase "Incubation Period" Mean?

It is that period from the time an animal is exposed to *Brucella spp.* bacteria until it shows symptoms of the disease, or until the animal has a significant serological response from the disease organisms.

What Is the Incubation Period of Brucellosis in Cattle?

It usually varies from 3 weeks (21 days) to 3 months (90 days). It can be as long as 285 days.

Can Cattle Be Cured of Brucellosis?

Efforts to develop a practical cure in cattle still have not been effective.

Can Brucellosis Be Prevented in Cattle?

Proper management practices can prevent brucellosis infection from being introduced into a brucellosis-free herd. Vaccination with Strain 19 vaccine is very effective.

How About Calfhood Vaccination?

Vaccination of 4 to 12 month-old heifer calves with Strain No. 19 vaccine helps build resistance to brucellosis infection.

Who Performs This Calf Vaccination?

Your local accredited veterinarian, state or federal veterinarians, and in some cases state-federal livestock inspectors. At the present time the state will provide funds for vaccination at no direct cost to the owner.

Should I Vaccinate My Calves Against Brucellosis?

Yes, you should. Due to the protection provided by the vaccine and the increased emphasis on vaccination requirements for interstate movement, herd owners should vaccinate their heifers with few exceptions.

Since some countries do not allow the importation of vaccinated cattle, a herd owner shipping to some international markets may not want to vaccinate.

How Effective Is Vaccination?

Studies indicate it is 80 to 90 percent effective under field conditions.

Will the Vaccine Cause Disease?

Strain 19 is a low virulence strain which has never been shown to spread from vaccinated to susceptible cattle and it has never reverted to the virulent form.

Does the Vaccine Cause Animals to Become Reactors?

The possibility of reduced dosage vaccine reaction on official tests has been greatly reduced.

What is Being Done to Control Brucellosis?

A cooperative state-federal eradication program is being waged nation-wide. Several states are presently classified as free under the proposed USDA program. This means they have not had a case of brucellosis in cattle for at least 12 months.

How Does the Brucellosis Program Work?

It is designed to locate infection, contain infection and help the owners of infected herds to eliminate the disease.

How Do You Locate Brucellosis Infection in Cattle?

1. Brucellosis milk ring test of all dairy herds.
2. Blood test at slaughter of potential breeding cattle.
3. Blood test of breeding cattle changing ownership.

How Do You Contain Infection in a Herd?

By quarantining all infected and exposed cattle.

How Do You Eliminate the Disease in an Infected Herd?

By blood testing all breeding cattle in the herd, immediately removing reactors and retesting the exposed cattle. Develop an individual herd plan with the Texas Animal Health Commission (TAHC), using your own veterinarian if desired.

What Do You Mean by Retesting the Quarantined Herd?

All exposed animals must be kept under quarantine until they have passed two consecutive negative tests over a period of at least 120 days.

Can I Sell Cattle from a Quarantined Herd?

Yes, exposed cattle can be sold to slaughter or to an approved quarantined feedlot or quarantined pasture on permit.

Who Pays for Brucellosis Testing?

The livestock owner bears the expense on private treaty sales and some market sales. The state-federal program provides funds for testing at markets that participate in the first point of concentration testing program. However, the markets may still charge the seller a fee for testing. When infection is found, the herd of origin is tested at state-federal expense.

What Cattle Must Be Tested?

All non-exempt breeding cattle 18 months of age or older, prior to change of ownership in Texas, and any untested cattle considered eligible according to state or federal regulation which are received by a slaughter establishment must be tested. Vaccinated dairy females under 20 months of age and vaccinated beef females under 24 months of age are exempt unless they are in their third trimester of pregnancy or have calved. In infected (quarantined) herds all non-exempt cattle 6 months old or older must be tested.

What Is the Initial Test Used in Brucellosis Testing?

The Buffered Brucella Antigen card test is used initially. A sample of serum from each animal is brought into contact with a test fluid containing killed Brucella organisms (antigen). If the animal is positive, the organisms in the test fluid will clump together (agglutinate).

Are the Card Test Results Final?

The owner may accept card test results or request supplemental tests.

What Are These Supplemental Tests?

The most common supplemental laboratory tests used are the rivanol and complement-fixation.

How Effective Are These Tests in Determining Field Strain Brucellosis?

Test results along with herd history allow a trained epidemiologist to make a diagnosis.

Are There Other Tests Available?

The Brucellosis Ring Test (BRT) is used as a surveillance test for dairies. Samples from the bulk milk tanks are tested 6 times a year. The State-Federal laboratory in Austin is equipped to provide full identification for Brucella organisms grown in the laboratory from milk or tissue samples.

How Can I Keep My Herd Brucellosis-Free?

1. Ask the seller to give you information on the brucellosis status of the herd or herds of origin of any cattle you buy.
2. Buy herd replacements only from known brucellosis-free herds.
3. Isolate cattle you buy from your herd and test them in 45 to 120 days following purchase to check for animals that might have been in the early stages of infection.
4. Practice calfhooed vaccination with Strain 19. Make vaccination for brucellosis as routine as vaccinating for other diseases.
5. Try to avoid exposure to animals outside your herd.
6. Test all animals that abort or give birth to dead or weak offspring as well as slow breeders and those which fail to calve.
7. If practical, separate cattle in late gestation and immediately after calving as this period accounts for a high percentage of the spread of infection from diseased cows.
8. Give serious consideration to a certified brucellosis-free herd. Get requirements from TAHC or your county agricultural agent.
9. Consult regularly with your veterinarian on herd health plans.

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