



Bovine Tuberculosis (TB) Update

Since January 2008, a total of seven cows from three California herds (containing a total of approximately 20,000 dairy cattle) have been diagnosed with bovine TB. Approximately 315,000 cattle have been TB-tested, two herds depopulated, over 8,000 cattle killed, and over \$16 million spent in this investigation. One herd is on a test and removal program. Strain typing indicates the cases had two separate sources - both similar to the southwest feeder cattle isolates.

TB Testing To Date		
	# Herd tests	# Cattle tests
Affected Herds	3	~20,000
Tested Herds	229	315,000

Classification

As of September 18, 2008, California is classified as "Modified Accredited Advanced" (MAA). Federal regulations require that for a state to regain its "TB Free" status a waiting period of two years must occur after depopulating the last affected herd or after the quarantine is released on the last affected herd, provided that no more infection is found.

Impact on California

Veterinarians and producers must check the TB-testing requirements of receiving states when moving cattle out of California; state requirements may be more restrictive than federal rules. Current federal rules require intact cattle over six months of age that originate in an MAA state to be officially identified and accompanied by a certificate stating that the animal tested negative to an official TB test conducted within 60 days prior to interstate movement. Exceptions include:

- Cattle from an accredited herd, with a whole herd test within 12 months of the movement
- Cattle moving directly to a federally inspected slaughter facility
- Feeder cattle – identification and TB testing requirements are delayed, and
- Breeding beef herds moving for grazing on a commuter herd agreement (Pasture to Pasture Permit) have the TB test requirement waived for the next 12 months. Premises identification numbers are highly recommended for these permits.

California Bovine Tuberculosis Control Plans

The California Department of Food and Agriculture (CDFA), USDA and the cattle industry are working together to control and eradicate bovine TB. Current plans to enhance the California TB program include:

- Continue testing herds epidemiologically linked with the affected herds
- Continue using official individual animal radio-frequency identification (RFID) in tested herds
- Explore regionalization plans to focus testing in the affected area
- Ensure slaughter surveillance on all cattle and annual testing of all raw milk dairies, and
- Ensure private practitioners apply accurate TB testing protocols.

Testing and Identification in Associated Herds

Herds associated with the affected herds are being tested. Herd owners are provided, free of charge, official individual animal RFID tags for test eligible cattle. Using RFID tags enhances accurate and efficient TB testing and traceability.

Caudal Fold Skin Test (CFT)

Cows typically become skin test positive 3-6 weeks after infection with *M. bovis*. Any response to this test



Caudal fold tuberculin test responder

must be reported to regulatory veterinarians immediately so they can apply either the gamma interferon or the CCT as confirmatory tests. Cattle positive to confirmatory tests are necropsied and

tissues sent to the National Veterinary Service Laboratory (NVSL) in Ames, Iowa.

Comparative Cervical Test (CCT)

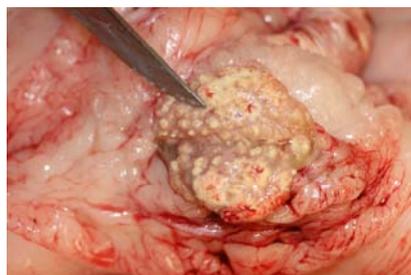
This skin test determines if a CFT response is more likely due to *M. bovis* or *M. avium*. It must be done within 10 days (or after 60 days) of the CFT test injection. Two areas on the neck are shaved, the skin thickness measured, and bovine and avian extracts injected at the separate sites. Responses are evaluated and measured 72 hours after the injections.

The differences in pre and post-test measurements determine the result as negative, suspect, or reactor.

TB Gamma Interferon Test

This test uses whole blood. The lymphocytes are stimulated with *M. bovis* and *M. avium* extracts, the supernatant harvested and tested by ELISA for gamma interferon. Cows typically become gamma interferon test positive 3-5 weeks after infection with *M. bovis*. CCT and gamma have equivalent sensitivity (73-100%) and specificity (85-99%).

National Report



Bovine lymph node showing lesions compatible with *Mycobacterium bovis*

At least 72 cattle herds plus 2 captive cervid herds have been detected with bovine TB since 2000; 31 between 2005 and now, with 11 disclosed in 2008.

Minnesota's cattle TB-status was downgraded to modified accredited (MA) in April 2008 (the third lowest level on the USDA five-tiered cattle TB ranking system) after 11 affected beef herds had been detected since 2005. In September 2008, they received split state status with an MA zone around the affected herds and infected wildlife area, and a MAA zone for the rest of the state.

Michigan has detected 44 affected cattle herds and two cervid herds since 1998. The state has three zones – the infected area is classified as MA, the Upper Peninsula is TB-free, and the rest of the state is MAA.

New Mexico lost its TB-free status in September after detecting a new infected herd – the entire state is now MAA.

Other states: A captive cervid (red deer and fallow deer) facility was detected in **New York** after routine skin testing an aged fallow deer. In 2007, TB was also detected in herds in **Colorado** and **Oklahoma**.

On Farm TB Prevention

The best ways for cattle producers to prevent bovine TB are to:

- Maintain a closed herd
- Obtain TB-free herd accreditation
- Isolate and test cattle entering the herd
- Prevent contact between breeding cattle and Mexican feeder cattle, including in the sick pen
- Prevent contact with cattle of unknown TB status
- Arrange professional diagnostic workups of suspicious sick or dead animals, and
- Establish a TB screening policy for employees

- Enhance disease tracing by recording individual animal identification and maintaining accurate records.

Risky Practices

Cattle producers must recognize and cease practices that threaten the entire cattle industry with bovine TB, especially mixing breeding cattle with feeder cattle. Furthermore, producers should enhance the identification and traceability of all cattle.

Update from the US Animal Health Association Meeting in Greensboro, NC, October, 2008

Dr. John Clifford, Deputy Administrator USDA APHIS/VS stated that the USDA can no longer afford to depopulate large dairy herds, especially when only one or two animals are infected. In addition, the program rules need greater flexibility to eradicate bovine TB and keep herds in business.

TB Funding

The USDA has notified states that additional funds for the bovine TB program are limited this year. Working with the cattle industry, CDFA is developing plans that account for this loss of funds and maintains an effective TB program.

Significance of Bovine TB

While the risk of humans contracting bovine TB is extremely low due to the safeguards of milk pasteurization and routine meat inspection, people can contract TB through consuming illegal soft cheese products and through respiratory exposure to live infected cattle or their carcasses. Conversely, humans infected with bovine TB can transmit disease to cattle.

CA TB Listening Session

The USDA has scheduled five "Listening Sessions" on bovine TB around the country in December 2008 to hear ideas on how to structure the program to match the resources available. One of those will be in California on **Friday, December 12, at the Sheraton Grand Sacramento Hotel, 1230 J Street, Sacramento. Free registration for the session begins at 7:00 am and the session run from 8:00 am to 4:30 pm.** The agenda includes opening presentations, questions posed to the audience, group discussions and open microphone times.

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