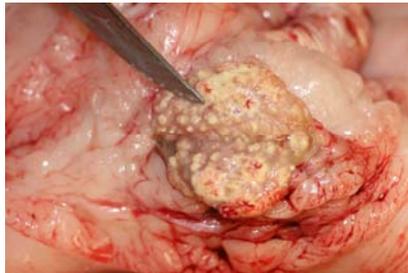




Bovine Tuberculosis (TB) Update

A new dairy herd in San Bernardino Co, tested as part of the current investigation, contained a cow with a lesion compatible with TB. This herd is quarantined and cattle movements are being investigated while the results are pending.

Since January 2008, seven cows from three Fresno Co herds have been diagnosed with bovine TB. Approximately 377,000 cattle have been TB-tested, two herds depopulated, over 8,000 cattle killed, and over \$20 million spent in this investigation. One affected 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.



Bovine lymph node showing lesions compatible with *Mycobacterium bovis*

TB Testing To Date		
	# Herd tests	# Cattle tests
Affected Herds	3	~20,000
Tested Herds	271	377,000

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 – however some states require a statement on the CVI that feeder cattle are not linked to a TB investigation and have not commingled with Mexican cattle
- Breeding beef herds moving for grazing on a commuter herd agreement (Pasture to Pasture Permit) have the TB test waived for the next 12 months. Premises identification numbers are highly recommended for these permits.

Bovine Tuberculosis Control Plans

The California Department of Food and Agriculture (CDFA) and the cattle industry have made the following recommendations to the USDA to improve the TB program to meet the changing livestock industry practices. These include to:

- Educate producers to recognize and implement biosecurity practices that prevent disease spread
- Base state status on disease prevalence and risk, not simply on number of infected herds
- Change the feeder cattle practices to reduce the exposure of breeding cattle to Mexican origin cattle
- Develop, implement and monitor improved diagnostic tests for live animals and for slaughter surveillance
- Improve investigation of TB cases to identify and test potentially exposed native cattle
- Improve border surveillance to prevent illegal movement of cattle
- Improve communication with the Center for Disease Control on human-livestock interactions
- Support development of effective TB vaccines, especially for application in wildlife populations
- Require application, recording and collection of official permanent individual identification of cattle moving in commerce

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)



Caudal fold tuberculin test responder

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

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. In December 2008, three infected cattle were identified at slaughter from one herd that entered the buyout program for cattle from the affected area.

Michigan has detected 45 affected cattle herds and three cervid herds since 1998, the most recent in Dec 2008, and three in the prior year. The state has three zones – the infected area, classified as MA, the Upper Peninsula, TB-free, and the rest of the state, MAA.

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

Other states: Infection in a captive cervid facility was detected in **New York** after routine skin testing on an aged fallow deer. **Indiana** is investigating a beef animal diagnosed with TB at a slaughter facility in Pennsylvania, and **North Dakota** is investigating a beef animal detected at a slaughter facility in Minnesota. 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.

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.

USDA TB Listening Session

The listening sessions in December 2008 provided industry members the opportunity to suggest major changes in the national TB program. Summaries will be placed on-line at www.aphis.usda.gov, Hot Issues, Bovine Tuberculosis.

CDFA Animal Health Branch Offices

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Redding	530-225-2140
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<http://www.cdfa.ca.gov> or <http://www.aphis.usda.gov>