

Bovine Tuberculosis and Brucellosis Surveillance Results
Monthly Reports, Federal Fiscal Year (FY) 2013
April 1–30, 2013

New Information – Bovine Tuberculosis (TB)

- Three new TB cases and three new affected beef herds were detected in April.
- One slaughter case occurred in a culled Jersey cow that was slaughtered in California and traced to a dispersed California dairy. Histology was compatible for mycobacteriosis and PCR was positive for *Mycobacterium tuberculosis* complex. Culture is pending. An investigation has been initiated.
- Two slaughter cases occurred in Mexican-origin fed steers slaughtered in Nebraska. The tissue histopathology from these animals was compatible for mycobacteriosis and PCR was positive for *M. tuberculosis* complex. Culture is pending. These animals had eartags indicating origins from Durango and Chihuahua.
- TB was confirmed in an Alcona County, Michigan, beef herd located in the modified accredited zone. The herd was detected by annual testing. One test-positive animal had lesions at necropsy; tissues were compatible for mycobacteriosis and PCR was positive. Culture is pending.
- TB was confirmed in two Michigan beef herds as a result of investigating a Saginaw County dairy. These herds are located in Gratiot and Midland counties.

Update of Previously Reported Information

- The investigation is ongoing for the affected dairy in Saginaw County, Michigan, in the State's accredited free zone. The herd was detected through slaughter surveillance. Seventy-five TB test-positive animals have been necropsied, and the estimated within-herd prevalence is approximately 9 percent based on gross lesions. Seventeen barn/feral cats were euthanized and five had gross lesions consistent with TB infection. Histology and culture are pending. Wildlife surveillance is ongoing within a 2-mile radius of the dairy. Genotyping results of the *M. bovis* isolate from the slaughter case match the Michigan strain. This dairy will be depopulated.
- Bovine TB has not been confirmed in a Washington State dairy. Two herds were tested, including the animal's birth herd and most recent herd of origin, in association with the investigation of a TB-infected cow that was slaughtered in Washington in January. The second whole-herd test of the most recent herd of origin was completed in early April and was negative. The herd was released from quarantine on April 15, 2013, and the investigation has been closed.
- Culture for a heifer slaughtered in Pennsylvania in February resulted in the isolation of a *Mycobacterium* species that is not *M. bovis*. The tissue was compatible for mycobacteriosis and PCR was negative.
- *M. intracellulare* was isolated from tissues submitted from a Holstein steer slaughtered in Wisconsin in March. Histology was compatible for mycobacteriosis and PCR was negative.
- A total of 11 TB cases have occurred in fed cattle in FY 2013 and all were of Mexican origin. The States of origin are Chihuahua (1), Coahuila (1), Durango (5), Tamaulipas (2), and Veracruz (1). The Mexican State of origin could not be determined for one case, which has been determined to be of Mexican origin through the case investigation. Culture is positive for *M. bovis* for nine of these cases and is pending for two.

Table 1. Bovine tuberculosis slaughter surveillance results, FY 2013.

Laboratory Status	New TB Cases April 1-30, 2013		Cumulative TB Cases October 1, 2012 to April 30, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed ^a	2	0	11	2	13
PCR pending	0	0	0	0	0
PCR negative, culture pending	0	0	0	0	0

^a Confirmed by PCR testing and/or culture.

Table 2. Livestock herds confirmed infected with bovine tuberculosis, FY 2013, including test-and-remove managed herds under quarantine and carried forward from previous fiscal years.

State	Federal Fiscal Year Detected	Method of Detection	Herd Type	Herd Management Plan	Origin and Number of Genotype Matches	Wildlife Surveillance Planned?	Approximate Number of Animal Traces	States With Traced Cattle
MI ^a	2004	Area Test	Dairy	Test and removal	MI	Ongoing	Not applicable	Not applicable
MI ^a	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI ^a	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI ^a	2012	Area Test	Beef	Partial depop ^b Balance of herd test and remove	New spoligo-type; VNTR ^c matches MI strains	Ongoing	73 traces of 166 animals None pending	MI
MI ^a	2012	Area Test	Dairy	Test and removal	MI	Ongoing	58 traces of 163 animals	IN, MI
MI	2013	Area Test	Dairy	Test and Remove	MI	Ongoing	109 traces of 200 animals	MI, IN
CA	2013	Slaughter	Dairy	Test and remove	Same as FY 2002 CA case	Pending	600 EMRS traces of 2500 cattle	AZ (2), CA (133), FL (2), IA (7), ID (1), MI (1), MN (1), NE (2), NM (2)
MI	2013	Slaughter	Dairy	Depopulation	MI	Ongoing	Pending	Pending
MI	2013	Annual Test	Beef	Depopulation	MI	Ongoing	Pending	Pending
MI	2013	Trace	Beef	Pending	MI	Pending	Pending	Pending
MI	2013	Trace	Beef	Pending	MI	Pending	Pending	Pending

^a Five herds detected in previous fiscal years that remain under quarantine are included.

^b State funded partial depopulation.

^c Variable number tandem repeat.

**Brucellosis – Herds Remaining under Quarantine, Test and Remove
Procedures or Awaiting Assurance Test Results**

FY 2013

No new brucellosis affected herds in the GYA thus far in FY 2013.

FY 2012

Idaho:

- Affected beef herd: A cattle herd (65 head) was traced from a slaughter sample from California. This herd was outside of the Idaho's designated surveillance area (DSA). The ID DSA has been expanded since detection of this herd. Two of three trace-in herds have tested negative. Movement controls are in place. All trace-out epidemiological investigations of these herds have been closed.
Updates: The whole-herd postcalving test on April 23 revealed one reactor cow. The remaining trace-in herd is scheduled for testing mid-May.
- Affected privately owned bison herd: A privately owned bison herd (268 head), assembled and located in the DSA in 2010, was tested to meet Idaho's DSA requirements. Two reactors were detected and were found culture positive for *Brucella abortus* biovar 4. Quarantine and movement controls are in place. Updated affected herd management plan is pending owner's signature. A herd test was conducted on March 26, 2011, with one female reactor identified.
Updates: None

Montana:

- Affected privately owned bison herd: A brucellosis-affected privately owned bison herd located in Madison County within Montana's DSA was detected on November 14, 2011. A whole-herd test was conducted in October 2011 that detected a single two-year-old bison bull as a reactor. *B. abortus* biovar 1 was isolated from a single lymph node from this bull. An affected herd management plan and quarantine and movement controls are in place.
Updates: All trace epidemiological investigations have been completed and closed.

Wyoming:

- Affected beef cattle herd: One beef herd located in Park County within Wyoming's DSA was determined to be brucellosis affected in October 13, 2011 as a result of pre-sale testing of 30 heifers (out of 250 heifers). The quarantine was released August 28, 2012. An affected herd management plan is in place. No trace-in or trace-out herds.
Updates: A whole-herd assurance test is scheduled to be completed in May 2013.

FY 2011

Montana:

- Affected privately owned bison herd: A brucellosis-affected privately owned bison herd was detected in Gallatin County in November 2010. This herd was detected as part of Montana's DSA herd management plan testing. Next complete herd test is scheduled for September/October 2011. The herd is under quarantine

with an affected herd management plan in place.

Updates: All trace epidemiological investigations have been completed and closed.

Wyoming:

- Affected bison herd: A brucellosis-affected privately owned bison herd inside the DSA (Park County) was disclosed in November 2010. This herd was detected via on-farm pre-sale testing. The Main herd remains under quarantine with an affected herd management plan in place. The Preferred herd has undergone four negative tests and was released from quarantine in late January 2012. All trace epidemiological investigations associated with this herd have been completed and closed.

Updates: None

Table 3: Livestock herds confirmed infected with brucellosis FY 2013, 2012 and 2011

State	Method of Detection	Herd Type	Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned?	Animals Being Traced	States Receiving Traced Cattle/ Bison
ID 2012	MCI trace	Beef	Quarantine with test & remove	Similar to 2006 & 2010 ID cattle isolates	Yes	48 animals	One trace-in State: ID, 3 herds, 2 closed & one scheduled for testing May 2013. 4 trace-out States: TX, UT, ID, & NM. All trace-outs closed.
ID 2012	DSA required test	Bison	Quarantine with test & remove	Similar to ID elk isolates	No	349 animals	5 trace-in States: ND, SD, MT, OK, ID All closed. One trace-out State: ID Closed
MT 2012	Epi link to 2011 bison herd	Bison	Quarantine with test and remove	Unique profile but the profile clusters with other isolates associated with GYA elk & bison	Yes	3169 animals	1 trace-in State: NE closed. 6 trace-out States: MT, CO, OR, SD, & NE closed. ID open
WY 2012	Pre-sale test on farm	Beef	Test & remove. Quarantine released.	Similar to 2007 & 2010 WY elk & 2010-2011 cattle isolates.	Yes	0	No trace-in herds. Not trace-out herds. Animals sold only to terminal feedlots or slaughter.
MT 2011	DSA herd management plan testing	Bison	Quarantine with test & remove	Exact match to a 2009 MT elk isolate	Yes	7510 animals	3 trace-in States: NM, NE & MT All trace-ins closed. 5 trace-out States: MT, NE, WY, KS & ID All trace-outs closed.

State	Method of Detection	Herd Type	Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned?	Animals Being Traced	States Receiving Traced Cattle/ Bison
WY 2011	Pre-sale test on farm	Bison	Main herd remains under quarantine with test & remove. Preferred herd released from quarantine.	Similar to 2007 & 2010 WY elk & 2010-2011 cattle isolates.	Yes	870 animals	1 trace-in State: SD - closed. 4 trace-out States: MT, WY, CO & NV All trace-outs closed.