

**Bovine Tuberculosis and Brucellosis Surveillance Results**  
**Monthly Reports, Federal Fiscal Year (FY) 2013**  
**January 1–31, 2013**

**New Information – Tuberculosis (TB)**

- Five new suspect TB cases were detected during January 2013.
- One case was in an adult dairy cow slaughtered in Washington. Histology was compatible for mycobacteriosis and polymerase chain reaction (PCR) was positive for *Mycobacterium tuberculosis* complex; culture is pending. The cow was born and resided in Washington for her entire life. TB testing has been completed in the most recent herd of origin and the birth herd, and is ongoing in epidemiologically linked herds.
- Four cases were detected in Mexican-origin fed cattle. One case was slaughtered in Colorado and three were slaughtered in Texas. All cases are compatible for mycobacteriosis and PCR was positive for *M. tuberculosis* complex; culture is pending. The Colorado case was certified at slaughter as Mexican origin but did not have Mexican official eartags. The three Texas cases had Mexican official eartags indicating origin from Coahuila (1) and Durango (2).

**Update of Previously Reported Information**

- Bovine TB has been confirmed in a California dairy, as a result of herd testing conducted in association with the investigation of a TB infected cow that was slaughtered in Arizona in September 2012.
- An atypical mycobacterium was cultured from tissues from a steer slaughtered in December in Illinois, ruling out *Mycobacterium bovis* infection. Histology was compatible for mycobacteriosis and PCR was negative.
- *Mycobacterium bovis* has been isolated from the tissues from two steers slaughtered in Texas in October and November 2012. Each animal had Mexican official eartags indicating origin from Tamaulipas. Histology was compatible for mycobacteriosis and PCR was positive for *M. tuberculosis* complex for both cases.
- An adult beef cow confirmed to be infected with TB was slaughtered in Texas in March 2012. Seventeen herds in Oklahoma and Texas have been tested to date and no additional infected animals were found. Testing is pending for one remaining herd in Texas.

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

Laboratory Status	New TB Cases January 1-31, 2013		Cumulative TB Cases October 1, 2012 to January 31, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed <sup>a</sup>	4	1	6	1	7
PCR pending	0	0	0	0	0
PCR negative, culture pending	0	0	0	0	0

<sup>a</sup> 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 <sup>a</sup>	2005	Area Test	Dairy	Pending	MI	Ongoing	Not applicable	Not applicable
MI <sup>a</sup>	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
MI <sup>a</sup>	2008	Surveillance	Cervid	Test and removal	MI	Ongoing	None	None
CA <sup>a</sup>	2011	Slaughter	Dairy	Test and removal	MEX = 3	Completed	None	None
MI <sup>a</sup>	2012	Area Test	Beef	Partial depop <sup>b</sup>	New spoligotype; VNTR <sup>c</sup> matches MI strains	Ongoing	73 traces of 166 animals None pending	MI
MI <sup>a</sup>	2012	Area Test	Dairy	Test and removal	MI	Ongoing	58 traces of 163 animals	IN, MI
MI	2013	Area Test	Dairy	Test and removal	MI	Ongoing	109 traces of 200 animals	MI, IN
CA	2013	Slaughter	Dairy	Pending	Same as FY 2002 CA case	Pending	Pending	Pending

<sup>a</sup> Six herds detected in previous fiscal years that remain under quarantine are included.

<sup>b</sup> State funded partial depopulation.

<sup>c</sup> 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. One suspect and five reactor animals and were detected on the initial whole herd test. A second negative whole herd test was completed January 8, 2013. All spayed heifers, except one, have been sold for feeding. A whole-herd test (post calving) is tentatively scheduled for April 2013. An affected herd management plan and quarantine and movement controls are in place.

All nine adjacent herds have been tested with negative results. Three trace-in herds are located in Idaho. Two of these herds have tested negative, and one is scheduled for testing in spring 2013. Movement controls are in place. All trace-out animals were destined for slaughter and the epidemiological investigations of these herds have been closed.

- 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. A second whole-herd test on December 12, 2012, of animals remaining on the premises was negative. A test on December 13 on adult males shipped to a feedlot detected one reactor adult bull. This reactor bull was slaughtered on January 31, 2013. An updated affected herd management plan is pending. Quarantine and movement controls are in place.

Elk have been seen in and around this herd. To mitigate bison contact with elk, the owners have built an elk-proof fence around 100 acres for use as a winter feeding enclosure. All trace-in and trace-out epidemiological investigations have been closed. All eight adjacent herds have tested negative for brucellosis.

#### **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.

Six hundred bison heifers tested negative in early May 2012. The second whole-herd test was conducted in October 2012. All animals tested brucellosis negative. Next complete herd test is scheduled for October 2013. An affected herd management plan and quarantine and movement

controls are in place. Adjacent herd testing has been completed with approximately 7300 head tested with negative results. The trace-in epidemiological investigation has been closed. One of six trace-out epidemiological investigations remains open.

### **Wyoming:**

- Affected beef cattle herd: One beef herd located in Park County within Wyoming's DSA was determined to be brucellosis affected in October 2011. In September, two 13-month beef heifers were found to be seropositive on brucellosis testing as a result of pre-sale testing of 30 heifers (out of 250 heifers). In October 2012, culture results confirmed infection with *B. abortus* biovar 1. This operation maintains a cow herd which is epidemiologically separate from the affected heifer herd. The cow herd was test negative and was released from quarantine in late 2011. A third negative whole-herd test (post-calving) was completed in late August 2012 and the quarantine was released August 28, 2012. An affected herd management plan is in place.

Whole-herd testing of two adjacent herds was negative. There are no trace-in herds since it is a closed herd (replacements home raised) and no trace-out herds because animals are only sold to slaughter or terminal feedlots. A whole-herd assurance test began in October 2012 and is partially completed. All animals assurance tested to date are brucellosis test negative.

### **FY 2011**

#### **Montana:**

- Affected beef cattle herd: In September 2011, six yearling heifers in a group of 65 animals tested serologically positive on a change of ownership test for movement out of the MT DSA (Park County). Four of the six heifers was culture positive for *B. abortus* biovar 1. A 10- month-old bull tested serologically positive in November, but culture results were negative. A post-calving herd test has been completed and all animals tested negative. This was the third consecutive negative herd test and the quarantine of the herd was released April 24, 2012. The assurance test for this herd was completed November 30, 2012 and all animals tested negative. An affected herd management plan is in place.

The adjacent herds have tested negative. Five of seven trace-out epidemiological investigations have been closed.

- 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 2013. The herd is under quarantine with an affected herd management plan in place.

All initial and assurance testing of adjacent herds is complete and has been negative. There are three trace-in states and five trace out states. A herd in one of the trace-in states and a herd in one of the trace-out states remain under epidemiological investigation. Approximately 7500 animals have been tested with negative results.

**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. This herd is comprised of two groups of animals, the cow-calf operation (Main herd) and the Preferred (breeder) herd.

A herd test of the Main herd was conducted on November 26, 2012 and 15 reactors were detected. Slaughter of the reactors is pending. The Main herd remains under quarantine with an affected herd management plan in place.

The Preferred herd is managed separately and epidemiologically distinct from the Main herd. The Preferred herd has undergone four negative tests and was released from quarantine in late January 2012. The Preferred herd had a whole herd assurance test (143 bison) on December 22, 2012 and all animals in this herd were negative.

All four adjacent herds have had negative herd tests and were released from quarantine in January 2012. All trace epidemiological investigations associated with this herd have been completed and closed.

**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?	Cattle Being Traced	States Receiving Traced Cattle/ Bison
ID 2012	MCI trace	Beef	Quarantine with test and remove	Similar to 2006 and 2010 ID cattle isolates	Yes	48 animals	<b>One trace-in State:</b> ID, 3 herds, 2 closed and one scheduled for testing spring 2013. <b>4 trace-out States:</b> TX, UT, ID, & NM. All trace-outs closed.
ID 2012	DSA required test	Bison	Quarantine with test and remove	Similar to ID elk isolates	No	349 animals	<b>5 trace -in States:</b> ND, SD, MT, OK, ID. <b>One trace-out State:</b> ID All trace-ins and trace-outs closed.

State	Method of Detection	Herd Type	Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned?	Cattle Being Traced	States Receiving Traced Cattle/ Bison
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 and bison	Yes	3169 animals	<b>1 trace-in State:</b> NE closed. <b>6 trace-out States:</b> MT, CO, OR, SD, & NE closed. ID open
WY 2012	Pre-sale test on farm	Beef	Test and remove. Quarantine released	Similar to 2007 & 2010 WY elk and 2010-2011 cattle	Yes	0	<b>No trace-in herds;</b> this is a closed herd. <b>No trace-out herds;</b> animals sold only to terminal feedlots or slaughter.
MT 2011	DSA herd management plan testing	Beef	Test and remove. Quarantine released.	Most similar to elk and previous cattle herd isolates from the area	Yes	22 herds	<b>7 trace-out States:</b> MT, MN, SD, UT, & WA closed. NE & ID open.
MT 2011	DSA herd management plan testing	Bison	Quarantine with test and remove	Exact match to a 2009 MT elk isolate	Yes	7510 animals	<b>3 trace-in States:</b> NM open; NE & MT closed. <b>5 trace-out States:</b> MT, NE, WY & ID closed. KS open.
WY 2011	Pre-sale test on farm	Bison	Test and remove. Main herd remains under quarantine. Preferred herd released from quarantine	Similar to 2007 & 2010 WY elk and 2010-2011 cattle	Yes	870 animals	<b>1 trace -in State:</b> SD closed. <b>4 trace-out States:</b> MT, WY, CO, & NV closed.