

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

**New Information – Bovine Tuberculosis (TB)**

- Two new suspect TB cases occurred in March.
- One case occurred in a Mexican origin fed steer slaughtered in Colorado. The tissues from this animal were compatible for mycobacteriosis and polymerase chain reaction (PCR) was positive for *Mycobacterium tuberculosis* complex, culture is pending. This animal had eartags indicating origin from Durango and is the fourth Durango case this fiscal year.
- One new suspect TB case occurred in a Holstein steer slaughtered in Wisconsin. Histology was compatible for mycobacteriosis and PCR was negative, culture is pending.

**Update of Previously Reported Information**

- Michigan declared a Saginaw County dairy as TB-affected after histocompatible lesions were detected in 8/9 caudal fold tuberculin test responders and PCR was positive for *M. tuberculosis* complex for tissues from two of these animals. Saginaw County is in the accredited free zone of Michigan. Parallel testing of 451 animals in early March by the caudal fold tuberculin skin test and interferon gamma resulted in 80 suspects (17.7 percent). This herd was discovered through the investigation of a TB infected cow slaughtered in Michigan in February. Genotyping results of the *M. bovis* isolate from the slaughter case match the Michigan strain.
- Bovine TB has not been confirmed in a Washington 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. A second herd test is scheduled for the animal's most recent herd of origin in early April. Genotyping results indicated that tissue on the identification device matched the lesioned tissue. An investigation at the slaughter establishment concluded that the trace correctly identified the quarantined herds. Testing in additional herds is not planned at this time. Genotyping the isolate from the slaughter case did not identify close matches in the NVSL database, though it was distantly related to fed cattle originating from Mexico.
- Culture is pending for tissues from a heifer slaughtered in Pennsylvania in February. The tissue was compatible for mycobacteriosis and PCR was negative.
- A total of nine TB cases have occurred in fed cattle and all were Mexican origin animals. The States of origin are Coahuila (1), Durango (4), Tamaulipas (2), and Veracruz (1). The Mexican State of origin could not be determined for the ninth case, but the case investigation indicates that the animal originated from Mexico. Culture is positive for *M. bovis* for six of these cases and is pending for three.

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

Laboratory Status	New TB Cases March 1-31, 2013		Cumulative TB Cases October 1, 2012 to March 31, 2013		
	Fed cattle	Adult cattle	Fed cattle	Adult cattle	Total
<i>M. bovis</i> cases, confirmed <sup>a</sup>	1	0	9	2	11
PCR pending	0	0	0	0	0
PCR negative, culture pending	1	0	2	0	2

<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	Test and removal	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
MI <sup>a</sup>	2012	Area Test	Beef	Partial depop <sup>b</sup>	New spoligo-type; 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 Remove	MI	Ongoing	109 traces of 200 animals	MI, IN
CA	2013	Slaughter	Dairy	Pending	Same as FY 2002 CA case	Pending	217 EMRS traces of 2500 cattle	(Pending in EMRS) AZ (2), CA (158), FL (2), IA (2), ID (1), KS (4), LA, MO (2), MN (1), NE (1), NM (1), TX
MI	2013	Slaughter	Dairy	Pending	MI	Pending	Pending	Pending

<sup>a</sup> Five 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. 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 remaining trace-in herd is scheduled for testing in late April 2013.
- 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.  
Updates: A herd test was conducted on March 26, 2013. One female reactor was identified by serological tests.

#### **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. The trace-in epidemiological investigation has been closed. One of six trace-out epidemiological investigations remains open.  
Updates: None

#### **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-outs herds. A whole-herd assurance test began in October 2012 and is scheduled to be completed in April 2013.  
Updates: None

### **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). The assurance test for this herd was completed

November 30, 2012 and all animals tested negative. An affected herd management plan is in place.

Updates: All trace 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.

Updates: None

**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	<b>One trace-in State:</b> ID, 3 herds, 2 closed & one scheduled for testing April 2013. <b>4 trace-out States:</b> 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	<b>5 trace-in States:</b> ND, SD, MT, OK, ID. <b>One trace-out State:</b> ID All trace-ins & trace-outs 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	<b>1 trace-in State:</b> NE closed. <b>6 trace-out States:</b> MT, CO, OR, SD, & NE closed. ID open

State	Method of Detection	Herd Type	Herd Management Plan	Genotyping Descriptive Results	Wildlife Surveillance Planned?	Animals Being Traced	States Receiving Traced Cattle/ Bison
WY 2012	Pre-sale test on farm	Beef	Test & remove. Quarantine released.	Similar to 2007 & 2010 WY elk & 2010-2011 cattle isolates.	Yes	0	<b>No trace-in herds. Not trace-out herds.</b> Animals sold only to terminal feedlots or slaughter.
MT 2011	DSA herd management plan testing	Beef	Test & remove. Quarantine released.	Most similar to elk & previous cattle herd isolates from the area	Yes	22 herds	<b>No trace-in States. 7 trace-out States:</b> MT, MN, SD, UT, WA, ID & NE All trace-outs closed
MT 2011	DSA herd management plan testing	Bison	Quarantine with test & 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, KS & ID All trace-outs closed.
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	<b>1 trace-in State:</b> SD - closed. <b>4 trace-out States:</b> MT, WY, CO & NV All trace-outs closed.